Hudson Bay Mining and Smelting Co., Limited

Annual report 1980

AR14

Hudson Bay Mining and Smelting Co., Limited

Interim Report
To Shareholders

Six Months
Ended June 30, 1980

Hudson Bay Mining and Smelting Co., Limited
Consolidated Statement of Earnings

	For the quarter ended June 30		For the six months ended June 30	
	1980	1979	**1980**	1979
	(in thousands)		(in thousands)	
Net sales	**$262,912**	$231,670	**$421,486**	$353,158
Interest and other income (Note 1)	**6,798**	7,837	**15,933**	12,770
	269,710	239,507	**437,419**	365,928
Cost of sales	**206,160**	186,551	**308,709**	281,028
Depreciation, depletion and amortization	**11,826**	9,910	**24,709**	19,774
Exploration	**1,967**	1,193	**3,782**	2,779
General administrative	**5,163**	4,246	**9,389**	8,143
Interest	**5,088**	4,704	**9,287**	8,778
	230,204	206,604	**355,876**	320,502
Earnings before taxes	**39,506**	32,903	**81,543**	45,426
Taxes and royalties	**20,374**	15,026	**39,797**	23,458
Earnings from operations	**19,132**	17,877	**41,746**	21,968
Other items:				
Minority interest in earnings of subsidiaries	**(7,806)**	(6,887)	**(13,755)**	(8,358)
Share of earnings (losses) of associated companies	**(981)**	2,708	**2,925**	2,791
	(8,787)	(4,179)	**(10,830)**	(5,567)
Earnings before extraordinary items	**10,345**	13,698	**30,916**	16,401
Gain on sale of investment, net of applicable expenses and taxes	—	—	**19,500**	—
Income tax reductions resulting from the application of prior years' losses	**198**	—	**1,691**	—
Net earnings for the period	**$ 10,543**	$ 13,698	**$ 52,107**	$ 16,401
Shares outstanding	**10,101,739**	10,101,739	**10,101,739**	10,101,739
Earnings per share:				
Before extraordinary items	**$ 1.03**	$ 1.36	**$ 3.07**	$ 1.63
After extraordinary items	**$ 1.05**	$ 1.36	**$ 5.16**	$ 1.63
Dividends paid per share	**$ 0.30**	$ 0.20	**$ 0.60**	$ 0.30

Consolidated Statement of Financial Position

	As at June 30	
	1980	1979
	(in thousands)	
Current assets	**$348,245**	$305,945
Current liabilities	**149,136**	132,640
Working capital	**199,109**	173,305
Investments	**94,307**	77,329
Property, plant and equipment	**362,822**	326,827
Other assets	**24,524**	19,994
Capital employed	**680,762**	597,455
Deduct:		
Long-term debt	**125,531**	123,990
Deferred income taxes	**114,363**	97,665
Minority interest in subsidiaries	**109,152**	100,294
	349,046	321,949
Shareholders' investment	**$331,716**	$275,506
Investment represented by:		
Share capital	**$ 71,247**	$ 71,247
Retained earnings	**260,469**	204,259
Total shareholders' investment	**$331,716**	$275,506

Hudson Bay Mining and Smelting Co., Limited
Consolidated Statement of Changes in Financial Position

	For the quarter ended June 30		For the six months ended June 30	
	1980	1979	**1980**	1979
	(in thousands)		(in thousands)	
Working capital provided:				
Earnings from operations	**$ 34,849**	$ 32,740	**$ 74,259**	$ 51,737
Proceeds on sale of investment, net of applicable expenses and current income taxes	**—**	—	**47,848**	—
Proceeds from long-term debt	**—**	184	**—**	524
	34,849	32,924	**122,107**	52,261
Working capital applied:				
Dividends	**3,030**	2,021	**6,061**	3,031
Dividends paid by subsidiaries to minority interests	**1,310**	464	**3,187**	2,458
Other investments	**1,080**	171	**1,730**	4,751
Property, plant and equipment	**25,185**	21,725	**43,498**	37,356
Reduction of long-term debt	**73**	1,226	**185**	1,389
Increase in other assets	**1,448**	875	**3,002**	346
	32,126	26,482	**57,663**	49,331
Increase in working capital	**2,723**	6,442	**64,444**	2,930
Working capital at beginning of period	**196,386**	166,863	**134,665**	170,375
Working capital at end of period	**$199,109**	$173,305	**$199,109**	$173,305

Notes:

(1) Interest and other income for the six months ended June 30, 1980, includes interest income of $8,425,000 (1979—$5,790,000) and currency translation losses of $1,218,000 ($383,000) applicable to foreign subsidiaries' working capital before minority interest therein.

(2) Due to increasing significance of timing differences and to ensure a more appropriate allocation of tax costs against earnings, the Company has changed, effective January 1, 1980, the method of accounting for mining royalties from the cash to the tax allocation method. This change has been applied retroactively and reduces previously reported earnings in the second quarter of 1979 by $829,000 (8¢ per share) and in the six months ended June 30, 1979, by $1,430,000 (14¢ per share) and results in a cumulative reduction of $116,000 in retained earnings at December 31, 1979.

(3) The financial statements are stated in Canadian currency and are subject to year-end audit.

To the Shareholders:

Net earnings for the second quarter totaled \$10,543,000, net sales amounted to \$262,912,000 and the earnings per share were \$1.03 before extraordinary items and \$1.05 after extraordinary items. Net earnings include an unrealized currency loss of \$1.8 million arising from the conversion of the working capital of our U.S. subsidiaries to Canadian dollars, largely due to the 4.1¢ appreciation of our dollar during the quarter. The comparable figures for the second quarter of 1979, when all sectors made positive contributions to profits, are as follows: net sales—\$231,670,000; net earnings—\$13,698,000; earnings per share—\$1.36. The 1979 earnings have been restated to reflect a change in the method of accounting for mining royalties from a cash to a tax allocation method. The lower earnings for the second quarter of 1980, compared with the same quarter a year ago, are the result of a loss at Inspiration Consolidated Copper, of Arizona, and lower prices for copper, zinc and silver, a downtrend that began in March.

The results for the first six months are as follows (comparable 1979 results in brackets: net sales—\$421,486,000 (\$353,158,000); earnings before extraordinary items—\$30,916,000 (\$16,401,000); net earnings after extraordinary items—\$52,107,000 (\$16,401,000). Earnings per share: before extraordinary items—\$3.07 (\$1.63); after extraordinary items—\$5.16 (\$1.63). The extraordinary items consist primarily of a gain of \$19.5 million on the realization of the Rosario investment.

The Canadian Metals Division met its production targets and accounted for slightly more than 50% of the net earnings for the second quarter.

Terra Chemicals International, of Iowa, whose earnings normally peak during the second quarter, reported record dollar sales for the quarter, although sales volume was adversely affected by poor weather, uncertainty arising from the U.S. Government's grain embargo and low commodity prices. Higher prices for fertilizer products and improved operations both contributed to record sales and to the more than doubling of earnings for the first six months from a year ago. As a result of its improved profit performance, Terra declared a quarterly dividend on its common stock, the first since the first quarter of 1979.

The petroleum sector also contributed significantly to net earnings as higher prices more than offset lower Indonesian production and the reduction in Canadian natural gas sales which reflected a slowdown in market growth, particularly export sales.

Inspiration Copper incurred a loss in the quarter due to process problems in the metallurgical operations during a period of extensive modification to these facilities, and to pricing adjustments to first-quarter shipments. Operations were shut down by an industry-wide strike on July 1 and at the time of writing there was no indications as to how long the strike might last. The ferric cure dump-leach project came into production just prior to the strike, ahead of schedule and under budget. A significant modernization program is underway in the concentrator and tankhouse and is due to be completed this September. Approval has been given to the first phase of a smelter environmental program which involves modifications to the convertors.

At midyear the Company began a major underground exploration program at its Tom Claims, a lead-zinc-silver deposit in the Yukon. The program will last about three years and cost approximately \$10 million. The primary objective is to follow up indications that additional reserves exist below the areas drilled to date. The secondary objective is to obtain more detailed information about the present reserves which are estimated at 10 million tons grading 7.6% zinc, 6.9% lead and 2.3 ounces of silver per ton.

The Board of Directors today declared a dividend of 30¢ per share payable in Canadian funds or the U.S. equivalent on September 5 to shareholders of record August 21.

E. P. GUSH
President

August 6, 1980

Hudson Bay Mining and Smelting Co., Limited

Corporate profile
Hudson Bay Mining is a diversified natural resource organization consisting of divisions, subsidiaries and associated companies with investments in metals, petroleum, fertilizers and chemicals. The Company has operated its own copper-zinc mines and metallurgical plants in northern Manitoba and Saskatchewan, Canada, since 1930. During the last 16 years it has made major investments in copper mining in the U.S.; in crude oil and natural gas in North America and Indonesia; in fertilizers, feed ingredients and crop-protection chemicals in the U.S.; and in other mining operations, industrial chemicals and zinc diecastings in Canada.

Hudson Bay Mining was incorporated on December 27, 1927; as of January 1, 1979, the authorized capital comprises an unlimited number of common shares, which are traded on the Toronto, New York and Montreal stock exchanges. On January 1, 1981, the Company had 8,851 shareholders and the total number of shares issued was 10,101,739.

Highlights 1980

Net earnings $41.4 million or $4.10 per share before extraordinary items
($28.4 million or $2.81 per share in 1979)

Net earnings $63.1 million or $6.25 per share including extraordinary items
($31.6 million or $3.13 per share in 1979)

Three mines under development in Manitoba.

$20 million modernization of the Flin Flon zinc refinery under way.

New ferric cure leach process launched at Inspiration Copper.

Modernization continues at Inspiration Copper with emphasis on smelter improvement.

Terra Chemicals had its best year since 1976.

Higher prices offset reduced petroleum production for Francana Oil & Gas.

$10 million underground exploration project begun on Tom claims in Yukon.

Entry into U.S. coal established through Inspiration Coal.

Marketing Division formed.

Contents

Cover: Ferric cure pad under spray at Inspiration Consolidated Copper Company's Arizona operations. The new patented system started up in late June. It produces leach solutions quickly and with high recovery rates from ores containing copper oxide minerals and chalcocite. See also page 25.

Inside Front Cover
Spruce Point mine near Flin Flon, Manitoba, scheduled for production in 1982.

Net earnings for 1980 of $41.4 million, or $4.10 per share before extraordinary items were an improvement over the previous year's restated net earnings before extraordinary items of $28.4 million, but were still not satisfactory. Third quarter earnings benefitted from the Company's $6.7 million share of the after-tax profit from the sale of the Douglas Creek Arch natural gas properties in Western Colorado. Including an extraordinary gain of $19.5 million on the realization of the investment made in Rosario Resources Corporation in the first quarter, total earnings for 1980 were $63.1 million or $6.25 per share compared to $31.6 million or to $3.13 per share in 1979. Dividends paid in 1980 amounted to $1.20 per share.

Analysis of contributions from operations

	1980	1979
	(in thousands)	
Metals:		
Canadian Metals Division	$ 29,225	$ 23,828
Inspiration Copper	(10,950)	2,047
	$ 18,275	$ 25,875
Petroleum	17,821	7,488
Fertilizers and chemicals	7,134	958
	$ 43,230	$ 34,321
Corporate costs	1,789	5,926
Earnings before extraordinary items	$ 41,441	$ 28,395

Operating contributions include investment amortization and foreign currency translation adjustments where applicable. 1980 corporate costs include increased tax benefits.

The Canadian Metals Division's operations, which contributed $29.2 million to earnings in 1980, showed an improvement over 1979, primarily because of higher metal prices in the first quarter. Inspiration Consolidated Copper Company recorded a loss in 1980, of which the Company's share was $10.9 million. The operations were adversely affected by a strike which lasted from July 1 until October 24. Terra Chemicals International, Inc., our U.S. fertilizer subsidiary, had its best year since 1976; demand for its products was strong, prices improved and the company's emphasis on assets management and return on assets is beginning to have an impact. The Company's share of earnings in 1980, including exchange gains, amounted to $7.1 million. Francana Oil & Gas Ltd. also increased its revenue and earnings, primarily because of higher prices for crude oil in Indonesia and natural gas in Canada, which more than offset reduced levels of Indonesian crude oil production resulting from normal reservoir decline and of Canadian natural gas production resulting from reduced demand for natural gas. The Company's share of earnings, including exchange gains, amounted to $17.8 million.

Canadian Metals Division

With minor exceptions, the Canadian Metals Division performed better than the year before. Operating problems, in part because of a shortage of skilled miners and tradesmen, continue to affect production at the Snow Lake mines. In the industrial products area, poor markets have detracted from the performance of both Zochem and Hudson Bay Diecastings, while stronger demand and prices boosted the value of Francana Minerals' sales to a record level. At Whitehorse Copper Mines, production of copper and precious metals was substantially above last year's levels.

Progress continued to be made in our programs to improve domestic production and upgrade plants and operations. Three new mines, Rod, Spruce Point and Trout Lake, are under development, while on-going studies to upgrade the metallurgical plants resulted in the implementation of several projects.

Last November, a joint venture agreement for the development of the Trout Lake orebodies near Flin Flon was signed by the Company, Granges Exploration AB and International Minerals Exploration Granges AB & Co., both of Sweden, Outokumpu OY of Finland, and Manitoba Mineral Resources Ltd. Under the agreement, the Company will earn a 44% interest in the joint venture by spending approximately $28 million to develop the property. Production will commence at 900 tons per day in mid-1982 and reach rated capacity of 1,800 tons per day in 1983. Surface construction at the new $14.5 million Rod mine in the Snow Lake area was almost completed during the year. Production at 500 tons per day is now scheduled to begin in 1983 when the mine will ship copper-zinc ore to the Snow Lake mill. Construction at the $16.1 million Spruce Point mine continued during the year and production at 720 tons per day is scheduled for 1982.

A three-year program to convert to mechanical handling of cathodes in the tankhouse was completed at a cost of $2.15 million. Construction of a $10 million zinc casting plant has been initiated. It will incorporate new casting and slab handling equipment, as well as an electric induction furnace for melting zinc cathode sheets, which will replace the two existing reverbatory-type melting furnaces. A new electrostatic precipitator unit is being installed, at a cost of about $5 million, to remove dust from the waste gas streams emanating from the zinc roasters. This should be in operation in late 1981.

In the Yukon, a $10 million, three-year exploration program on the Tom claims in the MacMillan Pass area was commenced to obtain additional underground data required before a feasibility study can be started. Underground exploration is to be initiated this spring, following the 1980 program of drilling, camp and portal construction.

Tantalum Mining Corporation of Canada Limited completed its $1,000,000 mill expansion plan, by modifying the gravity plant section and adding a new flotation section, thus increasing capacity from 750 to 1,000 tons per day to enable it to re-process tailings during the summer months. Tantalum Mining is working to improve recoveries of tantalum pentoxide, which have been disappointing since the mill expansion was completed.

Inspiration Consolidated Copper Company

Despite a 115-day strike, good progress was made on a number of capital projects to further upgrade the operation and improve the two metallurgical treatment routes at Inspiration Copper. The patented ferric cure leach process was brought on stream in late June, ahead of schedule and under budget. This system is designed to treat 6.0 million tons per year of ore-bearing materials and will provide approximately three times the copper in solution to the solvent extraction plant with the same solution flow rate. Production continued from the plant during the strike period and 16 million pounds of copper were stock-

piled for sale by the date of settlement. The solvent extraction plant has continued to perform well with the added ferric cure load.

Mining performance improved due, in part, to new equipment which began operation during 1980. The modernization of the concentrator continued during the year and the rehabilitation of the tankhouse is now essentially complete. Modification of the first smelter converter is under way. This program will ensure that production at the smelter will not be affected by periodic curtailments arising from emission violations. Emphasis will now be placed on completing the smelter improvement and water treatment programs.

Overall, however, total production in 1980 was disappointing due, in part, to the strike-affected shutdown of the metallurgical treatment route through the smelter and to various commissioning and start-up delays after the strike. The shutdown of the Anaconda smelter also affected production at Black Pine Mining Company which shipped flux to that facility.

Inspiration Copper has arranged a $US150 million loan facility to finance part of the modernization program.

Terra Chemicals International, Inc.

Terra Chemicals reported a significant improvement in operating results. Net sales for the year were a record $US299,002,000 compared with $US254,109,000 in 1979. There was strong demand and prices improved for its products during most of 1980. The company's plants performed well and generally met or exceeded production targets, especially during the fourth quarter. The company expects a good 1981 spring season, both in terms of firm prices and a continued volume of agricultural exports from the U.S.

Oil and natural gas

The consolidation of Francana Oil & Gas and Canadian Merrill Ltd. was completed on March 31, 1980. Under the reorganization agreement, Francana acquired the assets and business of Merrill, with Merrill shareholders acquiring 1.9 Francana shares for each outstanding common Merrill share, and Merrill employees becoming employees of Francana. The combined financial and technical strengths of the new organization will have a beneficial impact on Francana's operations.

During 1980, reduced nominations by the Company's major purchaser significantly lowered natural gas production.

In the third quarter of the year, proceeds from the sale of the Douglas Creek Arch natural gas properties, amounting to $US27.45 million, were used to retire all of Francana's $20.2 million debt, with the remainder being added to working capital. The sale resulted in the reorganization of operations such that all U.S. and international assets are now held through Trend International Limited, a subsidiary of Francana Oil & Gas.

The National Energy Program announced by the federal government of Canada in October has had a major negative impact on Francana's Canadian operations. The Company is however well placed to pursue expansion in the U.S. and internationally through Trend.

Coal

With a view to participating in the U.S. coal industry as it expands to supply increasing world energy demand, the Company, together with Minerals and Resources Corporation Limited, of Bermuda, established Inspiration Coal Inc. in November. It made its first acquisition in January, 1981, Bailey Mining Company of Bypro, Kentucky, which was a privately-owned company producing a high grade thermal coal. Currently producing 350,000 tons of clean coal annually, the operation will be expanded during 1981 to produce 750,000 tons of clean coal per year. It is felt that this first acquisition will make a solid foundation for future growth.

Marketing Division

The Company has formed a Marketing Division to handle all aspects of the marketing of copper, zinc and precious metals from the Canadian Metals Division, and all aspects of the marketing of products from Inspiration Copper. The new division consists of three groups, a copper and precious metals marketing group based in New York, a zinc and cadmium marketing group and a market research and development group based in Toronto.

Other matters

Proceedings continue in connection with the application filed in a Saskatchewan court to determine the compensation payable to the Company's wholly-owned subsidiary, Churchill River Power Co. (CRP), arising out of the termination of the 50-year licence to operate a hydro-electric plant at Island Falls, Saskatchewan. The amount of compensation is to be set by the court according to the terms of the licence and regulations under the Saskatchewan Water Power Act, since earlier discussions between CRP and the Saskatchwan Power Corp. (SPC) did not result in an agreement on the matter. CRP is claiming compensation of about $76 million to July 1, 1978, this amount to be adjusted to March 31, 1981, the expiry date of the licence. SPC has stated in documents filed in court that it is prepared to pay compensation of about $33.5 million to July 1, 1979, this amount to be adjusted to March 31, 1981.

M. Brian O'Shaughnessy has been appointed president of the Marketing Division. Raymond E. Exum has been appointed president of Inspiration Coal.

The Directors would like to take this opportunity to thank the Company's employees for their hard work, loyalty and dedication during the year, without which the achievements of 1980 would not have been possible. Our confidence in the future is based in large part on their continued efforts and commitment.

On behalf of the Board.

Chairman, President and
Chief Executive Officer.

March 6, 1981

Copper

The Western World refined copper supply declined 2.0% in 1980 compared to 1979. The main cause of this decline was the copper strike in the U.S.A.

Western World consumption, after a relatively good first quarter, worsened considerably as the year progressed with 1980 demand declining 2.8% versus 1979 levels. Double digit inflation and record high interest rates in North America led to sagging automotive sales and housing starts during the second half of the year. These end markets are prime areas of copper consumption. Declining consumption soon followed in Europe and Japan.

The year opened with optimism regarding the general economy and copper prices were on a rising trend. The Metals Week published price averaged \$US1.10 per lb for cathodes during the first quarter. Thereafter, prices softened and ended the fourth quarter averaging 94 cents.

The ratio of copper stocks to quarterly consumption is at a low level. This indicates that any strong recovery in consumption will be coupled with a need to refill the product pipeline to the consumer. This could exert considerable upward pressure on prices.

Zinc

The Western World supply of zinc metal declined 5.1% during 1980 compared to 1979. The decline was mainly due to a lack of incentive in prior years to invest in zinc mining facilities which led to inadequate mine production to meet demand requirements. Consequently, normal working concentrate stocks were depleted to bridge this gap.

Zinc consumption is cyclical with the general economy. The demand for zinc in galvanizing declined during the third quarter as recession spread to capital spending. All end use markets for zinc were depressed during the year and Western World consumption declined 4.0% in 1980 compared to 1979.

The Metals Week published price increased during the first quarter to average 38 cents U.S. per lb. After declining during the next two quarters, prices rose again during the fourth quarter, reflecting the already tight concentrate position, to average 39 cents U.S. per lb.

The ratio of zinc stocks to quarterly consumption is also at a low level. A recovery of zinc consumption will be accompanied by consumer demand to rebuild stocks.

Fertilizers, Chemicals

U.S. domestic agricultural nitrogen usage in 1980 increased by slightly more than 6%, to 11.4 million tons of nitrogen. Agricultural consumption of phosphates and potash fell by 4% and 1%, respectively.

It is expected that the pinch on growers' margins will be relieved this year as higher crop prices and a return to more normal yields combine to hold down increases in per-unit production costs. Net U.S. farm income in 1981, the most widely used indicator, is predicted to recover ground lost in 1980, increasing 14% to \$US31 billion.

Overseas demand for U.S. grain and soybean exports should remain firm through 1981, surpassing 1980's \$US40.5 billion. U.S. carryover stocks in 1981 are expected to be drawn down to less than one half the levels of 1980. These expectations, however, hinge substantially on growing conditions as they will materialize over the Northern Hemisphere during the next six months.

All of the above are positive influences on potential fertilizer and crop-protection chemical consumption in 1981. The improved economic condition on the farm could translate into record levels of fertilizer use.

In 1981, nitrogen consumption should continue to rise, by 2-4% or to approximately 11.7 million tons. Phosphates should register a gain of about 4% to match the record quantities applied in 1977 (5.63 million tons P_2O_5). Potash should record an even stronger increase, up to 6.4 million tons K_2O. Potential total tonnage of all three nutrients in 1981 could reach 23.7 million tons, 3.5% above last year's 22.9 million tons.

All types of crop-protection chemicals will continue to be in firm demand during 1981. In spite of being mostly petroleum-based, the cost to the farmer of purchasing crop-protection chemicals has increased at only about half the rate of other production inputs during the 1970s. The proportion of the grower's production costs accounted for by these chemicals is actually less today than it was ten years ago. Their prices are expected to rise by about 10% in 1981, approximately the same as in 1980. As a comparison, the price paid by farmers for all production inputs is projected to record a 13% increase in 1981.

Oil, Gas

The year 1980 was yet another period of rapidly increasing prices. The Organization of Petroleum Exporting Countries has been able to maintain continuity of supply and escalating prices despite significant supply interruptions and declining demand. The pattern should continue during 1981.

The recent OPEC pricing policy meeting held in Bali, Indonesia, resulted in a weighted average price of approximately \$42 per barrel from prices ranging from \$38 to \$48 per barrel. The price is 24% higher than at January 1, 1980, and 156% higher than at January 1, 1979. (All prices quoted are in Canadian dollars.)

United States

On January 28, 1981, President Reagan ordered immediate decontrol of crude oil and related product prices, and the price of U.S. domestic crude oil increased to the world price of approximately \$42 per barrel. It will increase revenues by approximately \$9.0 billion, of which the government's share would be approximately \$6.5 billion.

Natural gas prices are governed by the Natural Gas Policy Act of 1978. Conventional new natural gas was priced at \$2.81 per thousand cubic feet with certain classifications receiving as high as \$5.62 per thousand cubic feet at January 1, 1980. Under the Act natural gas prices will be decontrolled in 1985.

Canada

The National Energy Program proposes to regulate the wellhead price of crude oil and natural gas through 1990. The price of conventional crude oil, currently at \$17.75 per barrel, will increase each six months by \$1 through July 1983, by \$2.25 from January 1984 through July 1985 and \$3.50 from January 1986 through July 1990. The price rose by 20% in 1980 from \$14.75. The price for natural gas at the Toronto City Gate, currently at \$2.60 per thousand cubic feet, will not be increased during 1981 and then will be increased 15 cents per thousand cubic feet for each \$1 per barrel increase in the wellhead price of oil.

Hudson Bay Mining and Smelting Co., Limited

Consolidated financial statements

1980

Financial reporting

The Company's financial reporting presents the results of its operations and financial position in conformity with Canadian practice. Since securities of the Company are also registered in the U.S., reporting requirements of this jurisdiction continue to be incorporated.

Compared to prior years, several changes have been made to the format and contents of the 1980 financial statements, primarily related to changes in regulations which came into effect during 1980. This commentary is expanded, three years of earnings and changes in financial position data are presented, and supplementary petroleum disclosure is included. In addition to these changes, the unconsolidated financial statements are no longer presented; these are included in the Company's Form 10-K, a copy of which is available on request. The majority of readers will find their needs met by the consolidated financial statements. Some of the additional required information may make it more difficult for readers to focus on these needs.

While a number of technical differences exist between Canadian and U.S. generally accepted accounting principles we believe financial statements for the Company prepared according to either basis would result in similar interpretations by the reader. The only significant effect on reported earnings of the Company which would arise using U.S. generally accepted accounting principles would be the recording of unrealized exchange gains and losses on conversion of foreign currency long-term debt because of the use in the U.S. of end-of-period rates of exchange. Net earnings would be reduced by \$550,000 in 1980, increased by \$1,300,000 in 1979 and reduced by \$6,240,000 in 1978.

The major partially-owned subsidiaries which have been consolidated are Francana Oil & Gas Ltd. (including its partially-owned subsidiary, Trend International Limited) and Terra Chemicals International, Inc. The most significant investments in associated companies, which have been accounted for on the equity basis, are Inspiration Consolidated Copper Company and Tantalum Mining Corporation of Canada Limited.

1980 Highlights

Net sales of \$744,963,000 and earnings of \$63,108,000 achieved in 1980 were both records. Higher prices for metal, fertilizer, and petroleum products enhanced sales and earnings significantly. Profit on sale of natural gas properties was \$6,845,000 and a \$19,500,000 investment gain related to Rosario Resources accounted for the balance of the earnings improvement while losses incurred by Inspiration Consolidated Copper Company reduced earnings by \$10,950,000.

Dividends

Dividend payments totalled \$12,122,000 representing \$1.20 per share in 1980 compared to \$8,081,000 or 80 cents per share in 1979. Payments were made quarterly during both years; however, dividends were omitted during 1978. Dividends payable to non-residents of Canada are subject to withholding taxes. Regularly, the Board of Directors reviews the Company's financial position, its operating results and considers future developments and opportunities. In light of these factors, the Board establishes dividend declarations.

Liquidity

The Company's cash and short-term deposits position improved by \$79,924,000 during 1980. The sale of the Company's investment in shares of Rosario Resources Corporation contributed working capital of \$47,848,000. This investment had been acquired in 1979 at a cost of \$24,448,000.

While working capital improved by \$72,739,000 during 1980, the ratio of current assets to current liabilities increased only slightly to 2.3:1. There was a \$19,539,000 increase in income and other taxes payable which is discussed below and a \$22,086,000 increase in accounts payable both of which tended to offset significant increases in current assets. The increase in accounts payable relates to price increases for purchased commodities which have generally exceeded inflation levels. Metals and metal products inventories were \$67,302,000 at December 31, 1980 compared to \$52,687,000 at December 31, 1979. This increase is a reflection of higher inventories of copper and zinc and of the greatly increased carrying value of copper.

Fertilizers and chemicals inventories were up 36% at \$64,000,000 on December 31, 1980 due to good fourth quarter urea production rates and stockpiling of phosphates to take advantage of market price lows. These inventories are valued on the last-in, first-out basis which results in charges to current year's cost of sales which closely reflect current costs but which valued inventories at \$17,413,000 less than production cost at December 31, 1980.

Capital spending in 1980 was approximately \$83 million, almost the same as in 1979 and 1978. Plans for 1981, not all of which have been approved, call for capital spending to double. It is anticipated that these expenditures can be financed from internal sources.

Principal prepayments reduced long-term debt by \$25,163,000 in 1980 reducing long-term debt from 30.6% to 23.0% of total capitalization. As a result, the Company has significant financing capability available as opportunities to invest arise.

Taxes

In 1980, and to a lesser extent in 1979, there was considerable utilization of prior years' tax losses and investment tax credits. In 1980, tax expense increased by approximately \$27,800,000, most of which was payable currently. Utilization of prior years' tax losses has contributed 6% of combined 1979 – 1980 net earnings and in 1980 utilization of investment tax credits has reduced cash taxes by \$3,836,000.

Inspiration Copper, an associated company, proved an exception to this by virtue of its net loss position for tax purposes and the 1980 operating loss incurred. Inspiration has \$US21,000,000 of reductions available from future years' taxable income and \$US6,000,000 of investment tax credits which cannot be utilized while Inspiration has loss carryforwards. The Company's share of Inspiration's total losses reflect no benefit from future tax reductions. When realized, these benefits will be reported as an extraordinary item.

1980 compared with 1979

Net sales increased by 19% to \$744,963,000 from \$628,486,000 in 1979. Higher prices for all products accounted for this increase, while sales volumes for metals, fertilizers, oil and natural gas were lower. Metal sales reached \$308,917,000 in 1980 compared to \$271,520,000 in 1979, an increase of 14% attributable to higher unit selling prices for all metals, particularly gold price increases which added \$25,347,000 in revenues. Over half of metal sales volumes is derived from the sale of metal produced from concentrates purchased from other mines at prices which relate to current market less treatment fees. Copper and, to a lesser extent, zinc producer prices during 1980 were changed

frequently and maintained a close relationship to the commodity exchange prices. Fertilizers and chemicals sales rose to $311,072,000 from $263,282,000 in 1979, an increase of 18%, due to higher prices on a lesser volume of deliveries.

Sales of oil and gas increased to $124,974,000 in 1980 or 33% above $93,684,000 achieved in 1979, primarily because the OPEC crude oil price increases more than offset a 12% reduction in production from Trend's Indonesian production-sharing contract and a decline in Canadian gas production.

Other income increased in 1980 by $38,081,000 including $18,919,000 from a sale of natural gas properties. Whitehorse Copper Mines joint venture earnings increased by $5,349,000 resulting from higher production and metal prices, and interest earned on short-term deposits increased by $6,266,000 from higher cash flows and interest rates. During 1979 the cost of closing gold sale commitments reduced other income by $8,468,000. The unrealized exchange gain of $2,023,000 on translation of subsidiaries' accounts compares to a loss of $820,000 incurred in 1979.

Costs of sales for 1980 increased by 15% over 1979 as a result of higher labour, material and energy costs. However, gross margins improved as production costs did not rise as much as selling prices. Depreciation, depletion and amortization increased by 13% as a result of increased unit-of-production write-off rates.

Exploration expenditures of $9,701,000 represented an increase of 126% over 1979. Exploration activities increased during the year, principally on the Tom claims in the Yukon, and two previously investigated properties were written off.

Taxes increased to $75,925,000 in 1980 from $48,135,000 in the previous year and reflect higher earnings before taxes partially offset by a lower effective tax rate.

Share of losses of associated companies in 1980 totalled $8,104,000 compared to earnings of $3,624,000 in 1979, as Inspiration Copper experienced a four-month strike, related shut-down costs and otherwise lower production levels of finished copper than 1979. During the year, Inspiration incurred higher interest costs from new borrowings to finance capital expenditure programs to improve its operating efficiencies.

Tantalum Mining Corporation enjoyed greatly increased selling prices in 1980 and the Company's share of its earnings increased by $1,322,000 to $2,885,000 in 1980.

1979 compared with 1978

Increases in the free market selling prices for copper, zinc, gold, silver, molybdenum and tantalum in 1979 greatly increased earnings. The petroleum companies also improved earnings and were the second largest contributor to net earnings after the Canadian Metals Division. The unrealized exchange losses arising from conversion of the working capital of foreign subsidiaries to Canadian dollars had an immaterial effect on 1979 earnings, compared to 1978 when the gain represented approximately half of the earnings. The 1979 results reflected the Company's increased equity interest in Inspiration Copper, up from 36.5% to 50.0%.

Consolidated net sales increased 37% during the year primarily because of higher prices in all segments and increased fertilizer and chemical volumes. Metals sales increased 46% because of higher unit selling prices for all metals and greater deliveries of zinc.

Fertilizers and chemicals sales rose to $263,282,000 from $197,526,000 in 1978, an increase of 33%, due to a greater volume of deliveries and improved prices.

Sales of oil and gas increased to $93,684,000 in 1979 or 24% above the $75,447,000 reported in 1978, primarily because the OPEC crude oil price increases more than offset a 20% reduction in production from Trend's Indonesian production-sharing contract and because of increases in Canadian gas production and prices.

Depreciation, depletion and amortization increased as a result of generally lower developed reserves, which increased unit-of-production costs.

Other income was reduced in 1979 by a loss on closing out forward gold sale commitments; however, the Whitehorse Copper Mines joint venture earnings increased and a profit on sale of investments was earned. Interest income increased particularly because of higher interest rates.

Equity in earnings of associated companies in 1979 totalled $3,624,000 compared to a loss of $1,783,000 in 1978 as Inspiration Copper was profitable at the higher level of metal prices. In 1978 and 1977 losses were experienced as a result of the low level of production from Inspiration's mining operations.

Working capital declined by $33,791,000 during 1979 and by $43,280,000 during 1978 with the largest element of change each year being a reduction of $42,619,000 and $56,861,000 in cash and short-term deposits in 1979 and 1978 respectively. The decline was a function of new investments, which are detailed elsewhere, and capital expenditures.

Effects of inflation

The financial statements are reported reflecting historical costs and hence dollars of varying purchasing power. They do not isolate, therefore, the effects of inflation on the Company's businesses. Unaudited supplemental information is set out on page 32 to provide additional data and a discussion of how inflation affects Company operations.

Supplementary petroleum segment information

A variety of additional information on petroleum production, reserves, revenues, costs and an alternative accounting basis, Reserve Recognition Accounting, begins on page 33. This data should assist the reader in assessing that segment of business.

Management's report to the shareholders

The financial statements of the Company have been prepared by management in accordance with generally accepted accounting principles consistently applied. Because a precise determination of many assets and liabilities is dependent upon future events, the preparation of periodic financial statements necessarily involves the use of estimates and approximations. These have been made using careful judgement and with all information available up to February 13, 1981. The financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized in Note 1 of the notes to the consolidated financial statements.

A. M. Doull
Senior Vice-President, Finance

Consolidated statement of earnings

For the years ended December 31, 1980, 1979 and 1978

	1980	1979	1978
	(in thousands)		
Revenues:			
Net sales	$744,963	$628,486	$458,665
Interest and other income (Note 10)	58,347	20,266	24,226
	803,310	648,752	482,891
Costs and expenses:			
Cost of sales	548,312	476,831	368,482
Depreciation, depletion and amortization	50,708	44,872	35,510
Exploration expenses	9,701	4,285	3,375
General administrative expenses	21,712	18,631	15,540
Interest	17,461	17,766	14,931
	647,894	562,385	437,838
Earnings before taxes	**155,416**	**86,367**	**45,053**
Income taxes, mining taxes and royalties (Notes 2 and 11)	75,925	48,135	24,331
Earnings from operations	**79,491**	**38,232**	**20,722**
Deduct:			
Minority interest in earnings of subsidiaries	29,946	13,461	13,739
Share of losses (earnings) of associated companies (Note 4)	8,104	(3,624)	1,783
	38,050	9,837	15,522
Earnings before extraordinary items	**41,441**	**28,395**	**5,200**
Extraordinary items (Note 12):			
Gain on sale of investment	19,500	–	–
Income tax reductions	2,167	3,221	–
Net earnings for the year	**$ 63,108**	**$ 31,616**	**$ 5,200**
Earnings per share (Note 9):			
Before extraordinary items	$ **4.10**	$ **2.81**	$ **0.51**
After extraordinary items	$ **6.25**	$ **3.13**	$ **0.51**

Consolidated statement of retained earnings

For the years ended December 31, 1980, 1979 and 1978

	1980	1979	1978
	(in thousands)		
Retained earnings at beginning of the year:			
As previously reported	$214,539	$188,601	$183,508
Adjustment for deferred mining taxes (Note 2)	(116)	2,287	2,180
As restated	214,423	190,888	185,688
Net earnings for the year	63,108	31,616	5,200
	277,531	222,504	190,888
Dividends (per share 1980 – $1.20; 1979 – $0.80; 1978 – nil)	12,122	8,081	–
Retained earnings at end of the year	**$265,409**	**$214,423**	**$190,888**

See accompanying notes to the consolidated financial statements.

Consolidated statement of changes in financial position

For the years ended December 31, 1980, 1979 and 1978

	1980	1979	1978
		(in thousands)	
Working capital provided:			
Operations:			
Earnings from operations	$ 79,491	$ 38,232	$ 20,722
Depreciation, depletion and amortization	50,708	44,872	35,510
Deferred taxes	18,416	17,212	6,027
Dividends from associated company	4,125	113	–
Other	1,620	(516)	719
	154,360	99,913	62,978
Deferred petroleum revenue	6,940	1,919	1,883
Proceeds from long-term debt	–	4,417	18,809
Proceeds on sale of investments (Note 12)	47,848	1,010	–
	209,148	**107,259**	**83,670**
Working capital applied:			
Dividends	12,122	8,081	–
Dividends paid by subsidiaries to minority interests	5,622	5,350	6,277
Investments (Note 4)	3,504	40,078	31,626
Property, plant and equipment	83,525	82,116	83,354
Reduction of long-term debt	25,163	3,556	5,237
Increase in other assets	6,473	1,869	456
	136,409	**141,050**	**126,950**
Increase (decrease) in working capital	**72,739**	**(33,791)**	**(43,280)**
Working capital at beginning of the year	**138,467**	**172,258**	**215,538**
Working capital at end of the year	**$211,206**	**$138,467**	**$172,258**
Changes in working capital represented by:			
Increase (decrease) in current assets:			
Cash	$ (3,266)	$ 4,556	$ (3,518)
Short-term deposits	83,190	(47,175)	(53,343)
Accounts receivable	7,301	24,784	18,992
Inventories – metals and metal products	14,615	5,006	3,687
– fertilizers and chemicals	16,959	(221)	5,816
Income taxes recoverable	–	(4,329)	1,821
	118,799	(17,379)	(26,545)
(Increase) decrease in current liabilities:			
Accounts payable	(22,086)	(12,947)	(6,093)
Accrued liabilites	(969)	(4,846)	(6,182)
Income and other taxes payable	(19,539)	2,448	(5,829)
Current portion of long-term debt	(3,466)	(1,067)	1,369
	(46,060)	(16,412)	(16,735)
Increase (decrease) in working capital	**$ 72,739**	**$ (33,791)**	**$ (43,280)**

See accompanying notes to the consolidated financial statements.

Consolidated statement of financial position

As at December 31, 1980 and 1979	1980	1979
	(in thousands)	
Current assets:		
Cash	$ 9,357	$ 12,623
Short-term deposits	127,157	43,967
Accounts receivable	104,709	97,408
Inventories – metals and metal products	67,302	52,687
– fertilizers and chemicals (Note 3)	64,000	47,041
Total current assets	372,525	253,726
Deduct:		
Current liabilities:		
Accounts payable (Note 6)	109,267	87,181
Accrued liabilities	23,347	22,378
Income and other taxes payable	23,197	3,658
Current portion of long-term debt	5,508	2,042
Total current liabilities	161,319	115,259
Working capital	**211,206**	**138,467**
Add:		
Investments (Note 4)	78,428	113,332
Property, plant and equipment (Note 5)	379,036	346,219
Other assets	27,995	21,522
Capital employed	**696,665**	**619,540**
Deduct:		
Commitments and contingencies (Note 8)		
Long-term debt (Note 7)	100,553	125,716
Deferred petroleum income	10,742	3,802
Deferred taxes	125,595	103,582
Minority interest in subsidiaries	123,119	100,770
	360,009	333,870
Shareholders' investment	**$336,656**	**$285,670**
Investment represented by:		
Share capital (Note 9)	$ 71,247	$ 71,247
Retained earnings	265,409	214,423
Total shareholders' investment	**$336,656**	**$285,670**

Approved by the Board of Directors

Director: M. Wilson

Director: T. P. Lambert

See accompanying notes to the consolidated financial statements.

Notes to the consolidated financial statements

December 31, 1980, 1979 and 1978

1. Summary of significant accounting policies

Generally accepted accounting principles:
The financial statements are prepared in conformity with generally accepted accounting principles in Canada.

Principles of consolidation:
The consolidated financial statements include the accounts of Hudson Bay Mining and Smelting Co., Limited and all companies more than 50%-owned. In addition, the Company follows the equity method of accounting for its interest in associated companies in which it owns from 20% to 50% of the common shares.

Inventories, materials and supplies:
Inventories of metals, fertilizers and chemicals and all other saleable products are valued at the lower of cost or estimated net realizable value; metal by-products are valued at estimated net realizable value. Materials and supplies are valued at cost. Cost is determined on the first-in, first-out basis, except for the inventories of a subsidiary, Terra Chemicals International, Inc., which are valued on the last-in, first-out basis and which represent substantially all of the inventories of fertilizers and chemicals.

Property, plant and equipment:

Mineral properties – Exploration costs with respect to mines operating, or in the development stage, are capitalized as mineral properties and amortized by the unit-of-production method based on estimated recoverable reserves; all other mineral exploration costs are written off to expense as incurred.
Mine development expenditures – Expenditures on major mine development are capitalized and amortized by the unit-of-production method for each mine based on related estimated recoverable reserves.
Petroleum properties – Petroleum properties are accounted for on the full-cost basis, whether productive or nonproductive, whereby all costs relating to the exploration for and the development of petroleum resources are capitalized within cost centres by country and amortized by the unit-of-production method based on estimated recoverable reserves of producing properties.
Plant and equipment – Expenditures for plant and equipment additions, major replacements and improvements are capitalized in the property accounts; the cost of maintenance and repairs is charged to operating expense as incurred. Depreciation of mineral and petroleum plant and equipment is charged to operations by the unit-of-production method based on estimated recoverable reserves. Depreciation of other plant and equipment is charged to operations, generally on a straight-line basis over their estimated useful lives.

Income and mining taxes:
The Company follows the tax allocation method of providing for income and mining taxes. Deferred taxes represent primarily tax reductions for expenditures on mine development, petroleum and other properties and depreciation deducted in the determination of taxable income but not yet charged to earnings. Investment tax credits are recognized as realized.

Foreign currency translation:
The financial statements are expressed in Canadian dollars. Foreign currencies have been translated into Canadian dollars as follows: revenue, costs and expenses of foreign subsidiaries at the average rates of exchange for the period; noncurrent assets (including depreciation, depletion and amortization thereof) and noncurrent liabilities at rates in effect at dates of transactions; current assets and current liabilities at rates in effect at the end of the year. Gains and losses on currency translation are included in the statement of earnings.

2. Change in accounting principle

Due to the increasing significance of timing differences and to ensure a more appropriate allocation of mining tax costs against earnings, the Company has changed, effective January 1, 1980, the method of accounting for mining taxes from the taxes payable to the tax allocation method. This change has been applied retroactively and reduces previously reported earnings for the year ended December 31, 1979 by $2,403,000 (24 cents per share), and increases previously reported earnings for the year ended December 31, 1978 by $107,000 (1 cent per share). This change results in a cumulative reduction of $116,000 in retained earnings at December 31, 1979 and cumulative increases of $2,287,000 at December 31, 1978 and $2,180,000 at December 31, 1977.

3. Inventories

As indicated in Note 1, Terra Chemicals International, Inc. values its inventory on the last-in, first-out basis. If the first-in, first-out method of inventory valuation had been used, inventories would have been $17,143,000, $11,415,000 and $7,334,000 higher than reported at December 31, 1980, 1979 and 1978, respectively.

4. Investments (including advances)

	1980	1979
	(in thousands)	
Associated companies	$ 54,330	$ 68,190
Partnerships	14,249	15,393
Joint venture	8,485	7,050
Other – at cost:		
Quoted (market value 1980 – $1,820,000; 1979 – $37,984,000)	1,904	26,352
Unquoted	12,160	9,182
	91,128	126,167
Less provision for decline in value	12,700	12,835
	$ 78,428	$ 113,332

Associated companies:

Total investment:

	% of common share ownership		Equity in underlying net assets	
	1980	1979	1980	1979
			(in thousands)	
Inspiration Consolidated Copper Company	50.0%	50.0%	$ 43,847	$ 54,847
Tantalum Mining Corporation of Canada Limited	37.5%	37.5%	1,741	4,517
Lytton Minerals Limited	–	33.9%	–	120
Other companies			44	117
Equity in net assets			45,632	59,601
Unamortized excess of cost of investments over equity in net assets			8,698	8,589
			$ 54,330	$ 68,190

Changes in investment positions:	1980	1979	1978
	(in thousands)		
Inspiration Consolidated Copper Company	$ 128	$ 16,380	$ 16,576
Net investment in subsidiary companies	1,975	1,475	5,497
Rosario Resources Corporation (Note 12)	–	24,448	–
Tantalum Mining Corporation of Canada Limited	–	92	5,006
Partnerships	(1,144)	(3,239)	4,517
Other – net	2,545	922	30
	$ 3,504	$ 40,078	$ 31,626

Share of earnings (losses):	1980	1979	1978
	(in thousands)		
Inspiration Consolidated Copper Company	$(10,950)	$2,047	$(2,560)
Tantalum Mining Corporation of Canada Limited	2,885	1,563	290
Other	(39)	14	487
	$ (8,104)	$3,624	$(1,783)

The Company's share of the cash purchase of additional common shares of Inspiration Consolidated Copper Company as noted above exceeded the Company's equity in the underlying net assets by approximately $17,000 in 1980; $1,800,000 in 1979; $1,800,000 in 1978. The purchases increased the Company's common share ownership from 23.4% at the beginning of 1978 to 50% effective January 1, 1979. As at December 31, 1980, the Company has undertaken to purchase $US591,000 additional common shares upon the redemption of preferred shares held by minority interests.

Effective November, 1978, the Company acquired a 37.5% interest in Tantalum Mining Corporation of Canada Limited. During 1978, the Company increased its interest in Whitehorse Copper Mines Ltd. from 41.2% to 100%. The Company's interest in Terra Chemicals International, Inc. increased to 55.3% in 1980 from 53.5% in 1979 and 50.2% in 1978.

The unamortized excess of cost of investments in associated companies over equity in net assets is being written off against the Company's share of earnings generally over a period of 20 years.
The Company makes provision, in amounts which it considers prudent, for declines in value of investments.

The investment in partnerships represents Terra Chemicals International, Inc.'s 25% interest in an ammonia production facility and 65% interest in a nitrogen product upgrading facility. The investment consists principally of Terra's equity contributions and deferred pre-operating costs, which are being amortized, and advances.

5. Property, plant and equipment

Operating segment (at cost):	1980	1979
	(in thousands)	
Metals	$242,394	$225,078
Fertilizers and chemicals	85,070	81,591
Petroleum	269,932	227,805
	597,396	534,474
Less accumulated depreciation and depletion	264,528	233,281
	332,868	301,193
Unamortized mine development expenditures	46,168	45,026
	$379,036	$346,219

6. Lines of credit and short-term borrowings

Accounts payable includes bank loans of $1,608,000 in 1980 and $1,915,000 in 1979.

The Company and its major subsidiaries have lines of credit aggregating approximately $87,000,000 with banks in Canada and the United States with interest at bank prime rates.

The maximum amounts of short-term borrowings outstanding during 1980, 1979 and 1978 were $62,000,000, $48,000,000 and $30,000,000 respectively, and the approximate average amounts outstanding during each year were $10,000,000, $19,000,000 and $12,000,000 respectively, with weighted average interest rates of 15.9%, 12.2% and 8.7%.

7. Long-term debt

	1980	1979
	(in thousands)	
Hudson Bay Mining and Smelting Co., Limited:		
9% unsecured debentures due 1991 (see (a) below)	$ 20,001	$ 20,001
10½% unsecured debentures due 1995 ($US50,000,000) (see (b) below)	50,764	50,764
Mortgage loans	266	280
Francana Oil & Gas Ltd. (see (c) below):		
Secured bank production loans	–	20,469
Other (1979 – $US349,000)	–	374
Terra Chemicals International, Inc.:		
9⅝% unsecured notes (1980 – $US16,500,000; 1979 – $US17,500,000) (see (d) below)	16,745	17,760
8¾% unsecured notes ($US15,000,000) (see (e) below)	16,884	16,884
Other (1980 – $US626,000; 1979 – $US911,000)	635	962
	105,295	127,494
Included in current liabilities	4,742	1,778
	$ 100,553	$ 125,716

(a) Under the trust indenture covering the 9% unsecured debentures, sinking fund payments sufficient to retire $800,000 of principal amount are required each year until 1990. Debentures amounting to $4,999,000 (principal amount) have been purchased by the Company and cancelled. Therefore, no sinking fund payments have been required to date and $1,799,000 is available for application against future sinking fund requirements.
(b) Under the trust indenture covering the 10½% unsecured debentures, sinking fund payments to retire $US3,330,000 of principal amount each year from 1981 to 1994, inclusive, are required.
(c) Francana Oil & Gas Ltd. repaid all of its long-term debt (previously debt of Canadian Merrill Ltd. which amalgamated with Francana effective March 31, 1980) during 1980 from the proceeds on the sale of natural gas properties.
(d) The 9⅝% unsecured notes of Terra Chemicals International, Inc. are repayable in annual instalments of $US1,000,000 from 1981 to 1995, with $US1,500,000 due in 1996.
(e) The 8¾% unsecured notes of Terra Chemicals International, Inc. are repayable in annual instalments of $US1,000,000 from 1984 to 1998.
Interest and related expenses on long-term debt were: 1980 –$15,146,000; 1979 – $14,880,000; and 1978 – $13,728,000.

Sinking fund and principal payments, after allowing for prepayments, required over the next five years are as follows:

	Canadian funds	U.S. funds
	(in thousands)	
1981	$ 14	$4,599
1982	14	4,541
1983	615	4,358
1984	814	5,358
1985	814	5,358

8. Commitments and contingencies

(a) In 1978 the Province of Saskatchewan advised the Company that it would not renew the water power licence which expires March 31, 1981 for the facility supplying power to the Flin Flon/Snow Lake mining operations. The province intends to take over the power generating facility pursuant to the terms of the Water Power Regulations.
Compensation for the take-over will be established by the Saskatchewan Court of Queen's Bench. The Company has claimed compensation of about $76,000,000 as at July 1, 1978, this amount to be adjusted to March 31, 1981. The province has offered compensation of about $34,000,000. Certain ancillary assets may also be sold. As at December 31, 1980 the approximate net book value of the total facility was $1,000,000. When the consideration is fixed by the Court, any resultant gain over book value will be recorded as an extraordinary item.
The Company is negotiating with Manitoba Hydro to replace the power at rates which will be substantially higher than the current cost of power.
(b) In December 1980, the Company, through Inspiration Coal Inc., entered into an option agreement to purchase all the common shares of Bailey Mining Co.,Inc., a U.S. coal company, and to refinance that company. The cost of the Company's 50% interest is approximately $4,000,000. The option was exercised in January 1981; Inspiration Coal Inc. then guaranteed a Bailey Mining Co.,Inc. bank loan amounting to $US4,017,000.
(c) During 1978 the Company received a reassessment notice from the Department of National Revenue disallowing the deduction of a nonrefundable contribution for construction to Manitoba Hydro made in 1973, which was, in the opinion of the Company, a proper deduction. On the advice of its counsel, the Company has filed a formal Notice of Objection to the reassessment. Income taxes, penalties and interest paid with respect to the reassessment, aggregating $2,100,000, have not been charged to earnings pending settlement of the reassessment. Should the reassessment be upheld, the tax and related costs would be charged to retained earnings as a prior period adjustment.
(d) A subsidiary, Terra Chemicals International, Inc., is contingently liable for discounted notes subject to recourse aggregating $US9,801,000 at December 31, 1980 ($US7,190,000 at December 31, 1979) and is a 25% guarantor of $US77,220,000 of first mortgage notes payable of the ammonia production facility partnership referred to in Note 4.
(e) The Company is committed to various noncancellable leases expiring at various dates through 1992 and requiring aggregate minimum rental payments as follows:

	Canadian funds	U.S. funds
	(in thousands)	
1981	$ 757	$3,125
1982	757	2,471
1983	757	1,961
1984	757	1,449
1985 and thereafter	2,663	4,340

Total rental expense under all leases, including short-term cancellable leases, was approximately $5,339,000 for 1980; $4,648,000 for 1979; $4,075,000 for 1978.

9. Share capital and earnings per share

(a) The Company is authorized to issue an unlimited number of common shares. As at December 31, 1980 and 1979 there were issued and fully paid 10,101,739 shares.

(b) Under the Company's 1973 Share Option Plan for full-time officers and key employees, 200,000 unissued shares are reserved for granting of options at prices not less than 95% of the market value (full market value in the case of United States citizens) on the day the option is granted. No options have been granted under this plan.

(c) Earnings per share are calculated on the weighted average number of shares outstanding (10,101,739 shares for 1980, 1979 and 1978).

10. Interest and other income

	1980	1979	1978
	(in thousands)		
Interest income	$ 19,415	$ 13,149	$ 11,765
Share of earnings of joint venture	10,788	5,439	1,270
Fertilizer service revenue	3,656	3,471	2,607
Sale of natural gas properties – see below	18,919	–	–
Cost of closing gold sale commitments	–	(8,468)	–
Translation of subsidiaries' accounts – unrealized	2,023	(820)	5,191
Profit on sale of investments	355	4,157	–
Miscellaneous	3,191	3,338	3,393
	$ 58,347	$ 20,266	$ 24,226

A 58%-owned subsidiary sold natural gas properties in the United States for $18,919,000 which is net of acquisition and development costs. The resultant contribution to net earnings after provision for income tax and minority interest was $6,845,000.

11. Income taxes, mining taxes and royalties

	1980	1979	1978
	(in thousands)		
Income taxes:			
Current – Canada	$ 4,505	$ 410	$ 232
– Foreign	34,405	16,655	6,889
Deferred – Canada	6,931	10,720	1,422
– Foreign	9,548	4,089	4,712
Canadian mining taxes and royalties (Note 2):			
Current	18,599	13,858	11,183
Deferred	1,937	2,403	(107)
	$ 75,925	$ 48,135	$ 24,331

Income taxes of $55,389,000 in 1980; $31,874,000 in 1979; $13,255,000 in 1978, have been calculated using the following effective income tax rates. The reconciliation of the combined Canadian Federal and Provincial statutory income tax rates and the effective income tax rate is as follows:

	1980	1979	1978
Combined statutory income tax rate	50.3%	49.6%	48.0%
Nontaxable income	(1.8)	(0.3)	(1.3)
Canadian resource allowance	(6.7)	(3.3)	(9.6)
Depletion	–	(2.3)	0.1
Nondeductible mining taxes	7.9	7.1	–
Tax credits, rebates	(10.0)	(11.3)	(8.6)
Difference between Canadian and foreign tax rates	3.7	2.1	4.8
Nonallowable interest	–	–	0.6
Inventory allowance	(0.7)	(1.2)	(1.3)
Exchange translation	(0.2)	0.1	(3.8)
Other – net	(1.4)	5.0	0.3
Effective income tax rate	41.1%	45.5%	29.2%

The Company has available for application against future Canadian federal income taxes payable, if any, investment tax credits of approximately $1,760,000 which expire in the years 1984 and 1985. During 1980, $3,836,000 of investment tax credits were utilized. As explained in Note 12, an associated company also has investment tax credits and carryforward losses available for use in future years.

Deferred income taxes represent tax reductions applicable to the timing differences between amounts claimed in the year for income tax purposes and amounts charged to earnings. The source of these differences and the tax effect of each were as follows:

	1980	1979	1978
	(in thousands)		
Depreciation and depletion	$ 18,339	$ 4,842	$ 1,889
Amortization of mine development	1,522	1,430	105
Exploration expenditures	2,263	8,675	4,206
Rosario investment gain	(3,900)	–	–
Prior years' losses	(1,451)	–	–
Pension plan accrual	–	–	(24)
Write-off of investments	–	–	(71)
Preoperating expenditures	(110)	(119)	(75)
Other – net	(184)	(19)	104
	$ 16,479	$14,809	$ 6,134

Prior to 1978, an oil and gas subsidiary determined its Indonesian income taxes under a contract with the government which generally allowed for deduction of all costs incurred, although certain of these costs were capitalized and amortized for financial reporting purposes. It was not appropriate to provide for deferred Indonesian income taxes relative to these timing differences since additional future taxes were to be met by increased oil allocations under the production-sharing contract.

Effective January 1, 1978 the production-sharing contract was changed and Indonesian income taxes are now based on revenue and expense; deferred income taxes are being provided for relative to timing differences arising after that date. The capital costs as at December 31, 1977 will continue to be amortized and charged to earnings of future years as a non-deductible item. The unamortized balance of these non-deductible capital costs as at December 31; 1980, 1979 and 1978 was $US15,500,000, $US17,800,000 and $US21,000,000, respectively.

12. Extraordinary items

(a) During 1979, the Company purchased a 9.8% holding in Rosario Resources Corporation for a cash consideration of $24,448,000. In January, 1980, the Company made a tender offer for all of the outstanding shares of Rosario Resources Corporation at $US65 per share. On February 1, 1980, the Company sold its holding for $US75 per share for a total cash consideration of $51,816,000 ($US44,820,000) and withdrew its tender offer. This resulted in a gain of $19,500,000 after related costs and tax provision of $6,500,000 of which $2,600,000 is payable currently and a net increase in working capital of $47,848,000.

(b) The Company's portion of income tax reductions resulting from the application of prior years' losses are as follows:

	1980	1979
Hudson Bay Mining and Smelting Co., Limited	$ 1,451	$ -
Francana Oil & Gas Ltd.	472	-
Inspiration Consolidated Copper Company	-	1,564
Tantalum Mining Corporation of Canada Limited	244	300
Whitehorse Copper Mines Ltd.	-	1,357
	$ 2,167	$ 3,221

Inspiration Consolidated Copper Company, an associated company, has unrecorded income tax benefits related to prior years' losses of $US21,000,000 of which $US4,000,000 expires in 1984 and $US17,000,000 expires in 1987. In addition, Inspiration has investment tax credit carryforwards of $US6,000,000 which expire in varying amounts through 1987 with $US1,200,000 expiring in 1986 and $US3,275,000 expiring in 1987. The income tax savings with respect to these items will be recorded as an extraordinary item when realized.

Francana Oil & Gas Ltd., a subsidiary company, has foreign tax credits and investment tax credits available to reduce future taxable income of approximately $US8,604,000.

13. Retirement plans

The Company and its subsidiaries maintain non-contributory retirement plans which cover substantially all salaried and hourly paid employees.

Total cost of the plans approximated $4,121,000 in 1980; $4,370,000 in 1979; $4,626,000 in 1978 including past-service costs of $1,903,000 in 1980; $1,709,000 in 1979; $1,785,000 in 1978.

The unfunded past-service costs with respect to all the plans at December 31, 1980, 1979 and 1978, were approximately $9,000,000, $22,000,000 and $15,000,000 respectively, including unfunded vested benefits at the end of each year of approximately $7,000,000, $18,000,000 and $9,000,000, respectively, and are being funded and amortized over periods generally not exceeding 15 years.

14. Related party information

The Company, through its major (44%) shareholder, Anglo American Corporation of Canada Limited (Amcan) is associated with Minerals and Resources Corporation Limited (Minorco) and Anglo American Corporation of South Africa Limited. Minorco owns equally with the Company a U.S. holding company which in turn owns all of the common stock of Inspiration Consolidated Copper Company and of Inspiration Coal Inc. Minorco also owns 43% of Trend International Limited with the balance being owned by Francana Oil & Gas Ltd., a subsidiary, 58% owned by the Company and 17% by Amcan. Dividends paid by Trend to Minorco were $4,295,000 in 1980; $4,309,000 in 1979; $3,694,000 in 1978.

The Company provides administrative services in Toronto to certain Amcan group companies, some of which are joint venture partners with the Company in some exploration projects. The applicable costs are shared on a time or activity basis amongst the parties involved without any profit element.

The Company and Amcan equally own a company, Ambay Services Limited, that handles the surplus funds, cash requirements and money market activities of certain related companies, at relevant market rates. The amount which the Company had on deposit with Ambay fluctuated during the year with the maximum amount being $100,417,000; 1979 – $86,884,000; 1978 – $132,366,000 and the amount at December 31, 1980, was $79,070,000; December 31, 1979 – $24,901,000. The Company earned interest of $11,002,000 on these deposits in 1980; $6,962,000 in 1979; $8,011,000 in 1978.

Ambay advances to the Amcan group fluctuated during the year with the maximum amount being $24,032,000; 1979 – $867,000; 1978 – $3,362,000 and the amount at December 31, 1980 was $21,277,000; December 31, 1979 – $1,165,000 deposit.

The Company has a two-thirds interest in and is manager of a joint venture to operate the Whitehorse Copper mine; Amcan has the remaining one-third interest. The Company buys all of the concentrate produced by the joint venture at market prices for the metal contained and charges the joint venture for the costs of refining and marketing the metal. The Company purchased 20,535 tons of concentrate for $31,973,000 net of refining and marketing charges in 1980; 21,862 tons for $23,491,000 in 1979; 28,258 tons for $18,167,000 in 1978; and received $1,200,000 by way of special depreciation charge and $10,788,000 on account of profit in 1980; $1,191,000 and $5,439,000 respectively in 1979; $1,209,000 and $2,371,000 respectively in 1978.

The Company administers its pension trust fund and the majority of trustees are officers of the Company. On June 17, 1980 the Company purchased from its pension fund 76,000 shares of Francana Oil & Gas Ltd. at $20.00 per share being the market price for those shares on that day.

15. Business segment reporting

Financial data for 1980, 1979 and 1978 pertaining to the business segments of the Company are included following these notes.

Auditors' Report

To the shareholders of
Hudson Bay Mining and Smelting Co.,Limited:

We have examined the consolidated statement of financial position of Hudson Bay Mining and Smelting Co., Limited as at December 31, 1980 and 1979, and the consolidated statements of earnings, retained earnings and changes in financial position for each of the three years in the period ended December 31, 1980. Our examinations were made in accordance with auditing standards generally accepted in Canada, and accordingly included such tests and other procedures as we considered necessary in the circumstances. We did not examine financial statements for certain investments, which have been accounted for using the equity method of accounting, or of certain subsidiaries. The financial statements for these entities were reported upon by other auditors and our opinion, insofar as it relates to the amounts included for such entities, is based solely upon reports of the other auditors.

In our opinion, based upon our examination and the reports of other auditors, these consolidated financial statements present fairly the financial position of the Company as at December 31, 1980 and 1979, and the results of its operations and the changes in its financial position for each of the three years in the period ended December 31, 1980 in accordance with accounting principles generally accepted in Canada applied, after giving effect to the retroactive change in method of accounting for mining taxes, with which we concur, from the taxes payable basis to the tax allocation basis, as explained in Note 2 to the financial statements, on a consistent basis.

Deloitte Haskins & Sells
Chartered Accountants
Toronto, Canada
February 13, 1981

Dividends, market price ranges and related security holder matters (unaudited)

(By quarters)

		Market range			
	Dividends Declared Cdn	Toronto stock exchange **(Principal market)** $Cdn		New York stock exchange $US	
		High	**Low**	**High**	**Low**
1980					
1st	30¢	38⅛	21½	33	17⅞
2nd	30¢	28¼	22¾	24⅝	19¼
3rd	30¢	35¾	27⅜	30⅞	24
4th	30¢	40	31½	34½	26½
1979					
1st	10¢	24⅜	19⅞	21	17
2nd	20¢	23¼	19	20⅛	16½
3rd	20¢	27⅞	20¼	24⅜	17½
4th	30¢	30	20¼	25⅞	17⅝

On December 31, 1980 the Company had 8,851 shareholders (1979 - 9,556) and the total number of shares issued was 10,101,739 unchanged from 1979.

Selected financial data

(in thousands except per share data)

	1980	1979	1978	1977	1976
Capital expenditures	$ 83,525	$ 82,116	$ 83,354	$ 64,771	$ 46,762
Investment expenditures	3,504	40,078	31,626	11,306	17,254
Working capital	211,206	138,467	172,258	215,538	85,758
Total assets	857,984	734,799	669,795	618,736	476,289
Capital employed	696,665	619,540	570,948	536,624	405,676
Long-term debt	100,553	125,716	124,855	110,994	93,216
Shareholders' investment	336,656	285,670	262,135	256,935	204,703
Dividends	12,122	8,081	-	6,061	8,018
Dividends paid per share	1.20	0.80	-	0.60	0.80
Revenues:					
Net sales	$744,963	$628,486	$458,665	$346,346	$343,647
Other income	58,347	20,266	24,226	18,386	2,828
Cost and expenses	647,894	562,385	437,838	300,385	292,670
Taxes and royalties	75,925	48,135	24,331	39,334	48,231
Minority interest	29,946	13,461	13,739	16,677	4,006
Equity earnings (losses)	(8,104)	3,624	(1,783)	(2,620)	2,224
Earnings before extraordinary items	41,441	28,395	5,200	5,716	3,792
Extraordinary items	21,667	3,221	-	52,577	(11,098)
Net earnings (loss)	63,108	31,616	5,200	58,293	(7,306)
Earnings (loss) per share:					
Before extraordinary items	4.10	2.81	0.51	0.57	0.38
After extraordinary items	6.25	3.13	0.51	5.77	(0.73)

Selected quarterly consolidated financial data (unaudited)

(in thousands except per share data)

	Quarters ended			
	March 31	June 30	Sept.30	Dec. 31
1980				
Net sales	$158,574	$262,912	$160,203	$163,274
Earnings before taxes and royalties	42,037	39,506	46,467	27,406
Earnings before extraordinary items	20,571	10,345	5,948	4,577
Net earnings	41,564	10,543	5,443	5,558
Earnings per share:				
Before extraordinary items	2.04	1.03	0.58	0.45
After extraordinary items	4.11	1.05	0.54	0.55
Dividends paid per share	0.30	0.30	0.30	0.30
1979				
Net sales	$121,488	$231,670	$133,550	$141,778
Earnings before taxes and royalties	12,523	32,903	16,422	24,519
Earnings before extraordinary item	2,703	13,698	3,605	8,389
Net earnings	2,703	13,698	3,605	11,610
Earnings per share:				
Before extraordinary item	0.27	1.36	0.35	0.83
After extraordinary item	0.27	1.36	0.35	1.15
Dividends paid per share	0.10	0.20	0.20	0.30
1978				
Net sales	$ 85,833	$173,923	$103,447	$ 95,462
Earnings before taxes and royalties	6,749	18,246	10,957	9,101
Net earnings (losses)	(1,614)	4,383	996	1,435
Earnings (loss) per share	(0.16)	0.43	0.10	0.14
Dividends paid per share	-	-	-	-

Quarterly financial information is restated to reflect the change in the method of accounting for mining taxes (Note 2).

Operations by segments

Operations by segment before minority interests (in thousands)

	Metals			Fertilizers and Chemicals			Petroleum			Corporate			Consolidated		
	1980	1979	1978	1980	1979	1978	1980	1979	1978	1980	1979	1978	1980	1979	1978
Revenue															
Canadian operations:															
Canada	$117,105	$126,315	$ 76,149	$ –	$ –	$ –	$ 51,939	$ 42,672	$ 33,307	$ –	$ –	$ –	$169,044	$168,987	$109,456
Export – United States	163,589	118,775	50,751	–	–	–	–	–	1,689	–	–	–	163,589	118,775	52,440
Export – Europe	28,223	26,430	58,792	–	–	–	–	–	–	–	–	–	28,223	26,430	58,792
Foreign operations:															
United States	–	–	–	311,072	263,282	197,526	9,965	7,986	3,744	–	–	–	321,037	271,268	201,270
Southeast Asia	–	–	–	–	–	–	63,070	43,026	36,707	–	–	–	63,070	43,026	36,707
Net sales	308,917	271,520	185,692	311,072	263,282	197,526	124,974	93,684	75,447	–	–	–	744,963	628,486	458,665
Interest income:															
Canada	122	107	192	–	–	–	947	1,069	113	11,246	7,099	8,026	12,315	8,275	8,331
United States/Europe	–	–	–	4,451	3,076	2,110	2,283	1,798	1,324	366	–	–	7,100	4,874	3,434
Other income	13,275	(607)	3,374	5,305	3,014	6,638	21,833	3,656	2,545	(1,481)	1,054	(96)	38,932	7,117	12,461
Total revenue	$322,314	$271,020	$189,258	$320,828	$269,372	$206,274	$150,037	$100,207	$ 79,429	$ 10,131	$ 8,153	$ 7,930	$803,310	$648,752	$482,891
Operating profit															
Canada	$ 60,534	$ 30,888	$ 2,734	$ –	$ –	$ –	$ 19,211	$ 27,946	$ 17,681	$ 11,246	$ 7,099	$ 8,026	$ 90,991	$ 65,933	$ 28,441
United States	–	–	–	23,332	11,145	6,337	20,311	2,399	2,024	366	–	–	44,009	13,544	8,361
Southeast Asia	–	–	–	–	–	–	41,845	28,524	28,577	–	–	–	41,845	28,524	28,577
	$ 60,534	$ 30,888	$ 2,734	$ 23,332	$ 11,145	$ 6,337	$ 81,367	$ 58,869	$ 48,282	$ 11,612	$ 7,099	$ 8,026	$176,845	$108,001	$ 65,379
Other corporate expense													(1,481)	1,054	(96)
General corporate expense													(2,487)	(4,922)	(5,299)
Interest expense													(17,461)	(17,766)	(14,931)
Earnings before taxes													$155,416	$ 86,367	$ 45,053
Identifiable assets:															
Canada	$280,670	$267,825	$187,812	$ –	$ –	$ –	$127,874	$106,240	$103,596	$ 99,190	$ 57,526	$121,931	$507,734	$431,591	$413,339
United States	48,291	57,917	38,003	187,616	155,535	154,600	85,119	60,511	30,184	–	–	–	321,026	273,963	222,787
Southeast Asia	–	–	–	–	–	–	29,224	29,245	33,669	–	–	–	29,224	29,245	33,669
Total identifiable assets	$328,961	$325,742	$225,815	$187,616	$155,535	$154,600	$242,217	$195,996	$167,449	$ 99,190	$ 57,526	$121,931	$857,984	$734,799	$669,795
Depreciation, depletion and amortization expense	$ 23,250	$ 20,582	$ 16,508	$ 6,120	$ 5,958	$ 5,348	$ 20,858	$ 18,096	$ 13,373	$ 480	$ 236	$ 281	$ 50,708	$ 44,872	$ 35,510
Capital expenditures	$ 30,557	$ 36,269	$ 44,285	$ 4,373	$ 3,410	$ 9,967	$ 45,573	$ 42,348	$ 28,931	$ 3,022	$ 89	$ 171	$ 83,525	$ 82,116	$ 83,354

Business segments

Metals
Mining, milling, smelting, refining and sale of copper, zinc, gold, silver and cadmium; production and sale of zinc oxide and zinc diecastings

Fertilizers and chemicals
Production and sale of ammonia and derivatives for inorganic fertilizers and animal feed; purchase of potash, phosphate and agricultural chemicals for production of mixed fertilizers and resale

Petroleum
Exploration, development, production and sale of natural gas, oil and condensates

Corporate
Corporate operations relate primarily to the management and administration of cash, short-term securities and investments

Review of Operations

lockwise from top left: Oil drilling rig; Ferric cure
ad construction at Inspiration Copper; Terra
achine applies liquid fertilizer; Coal washing plant
f Bailey Mining, Kentucky; "Giraffe" underground at
antalum Mining; Tungsten prospect in Yukon.

Profile

The Canadian Metals Division is responsible for mining and metallurgical operations in the Flin Flon – Snow Lake area of northern Manitoba, at Whitehorse Copper Mines in the Yukon and at Tantalum Mining Corporation of Canada Limited in southeastern Manitoba. Its industrial product responsibilities comprise Francana Minerals Ltd. in Saskatchewan and Zochem and Hudson Bay Diecastings at Brampton, Ontario; these operations produce detergent-grade sodium sulphate and salt cake, zinc oxide and zinc-base diecastings, respectively.

In the Flin Flon – Snow Lake area, the Canadian Metals Division is currently operating nine copper-zinc mines, two concentrators, one at Flin Flon and one at Snow Lake, and a copper smelter and zinc refinery at Flin Flon. In addition to processing its own mine production, the Division treats copper and zinc concentrates purchased from other sources.

The Division has financial, administrative, technical and transportation personnel in Toronto. All metals are sold through the Marketing Division of Hudson Bay Mining and Smelting Co., Limited; industrial products are sold by the Division's sales staff.

Production of refined copper, which was at a record level, and of zinc increased over 1979. Sales volumes were lower than in 1979 when sales were made from inventory. Improved sales prices, however, resulted in an increase in sales revenue from metals of approximately 12%. Production and sales include metals from the Division's Flin Flon/Snow Lake mines and metallurgical plants, Whitehorse Copper Mines and purchased concentrates.
The industrial product operations continued to be affected by the slump in the automotive market. Francana Minerals sold almost all of its production, with sales value at record levels.
Operating earnings of the Division were \$29.2 million in 1980 compared to \$23.8 million in 1979.

Flin Flon-Snow Lake operations
Copper production from all sources increased by some 8.6% over 1979 with the additional production realized mainly through the increased treatment of purchased concentrates. Zinc production increased by 3.8% with the increase coming from both our own operations and from purchased sources. Precious metal production was also significantly higher.

Mining – Flin Flon area
In the Flin Flon mine, development and mining of remnants continued, North Main shaft pillar development being emphasized. Centennial mine production resumed in March, having been halted in November, 1979, when a bulkhead failure resulted in a run of fill into the mine, and continued throughout the year. Production and development were continuous throughout 1980 at White Lake and Westarm with company personnel replacing the White Lake mine contractor in April.

Mining – Snow Lake area
Development and production continued throughout the year at all Snow Lake area mines. A shortage of skilled miners and tradesmen continues to affect production, particularly at Stall and Anderson Lake mines; mine development in various projects was also affected.

Environmental control
Environmental licensing procedures were completed during the year for all operating mines, for two mines under development and for the reissuing of a licence covering atmospheric emissions. Increasing emphasis was placed on workplace environment and industrial hygiene.

Major projects
In the tankhouse the conversion to mechanical handling of cathodes was completed in October. Construction of a new zinc casting plant is well under way with completion scheduled for mid-1982. An improved purification process is now being incorporated in the zinc leaching plant with commissioning planned for mid-1981. Installation of two new zinc roaster precipitators is to be completed in December, 1981. Surface plant construction at the Rod mine started early in the year and was nearly completed by year-end. Shaft sinking will follow in the spring. Shaft sinking at Spruce Point started in April and by year-end a depth of 334 metres had been attained. Work on the Trout Lake property started in mid-year and at year-end a road and transmission line to the site had been completed and 200 metres of the main decline had been driven.

Industrial relations
Several new employee programs were instituted during the year. These were: a visiting nurse program; a briefing procedure to enhance communications between management and employees; and a technical personnel exchange program with a major European mining company. As well, the Company remains fully committed to its native northerner employment program. Increased emphasis was placed on employee training with more than 2,150 employees participating. A continuing campaign to improve safety standards was also pursued. At year-end there were 2,630 employees on the payroll compared to 2,497 at the end of 1979.

Whitehorse Copper Mines
Higher grade ore resulted in a 35% increase in metal production.

Mining
Vertical-crater-retreat mining proved successful in reducing both dilution and secondary blasting to acceptable levels. By mid-year the bulk of production was from crater stopes. At year-end the initial Middle Chief stope was fully drilled, and production of ore is

Senior management
President: H.S. Schwartz
Senior Vice-President: J.R. Sadler
Vice-President – Finance: R.R. Galipeau
Vice-President – Industrials: D.C. Smith
Vice-President – Technical Development: T.A. O'Hara

Mining Operations:
Flin Flon/Snow Lake – Vice-President/General Mgr.: W.K. Callander
Whitehorse Copper Mines – Vice-President: R.D.B. Linzey
Tantalum Mining Corporation – Vice-President Operations: C.T. Williams

Industrial Products Operations:
Francana Minerals Ltd. – General Manager: R.V. Tomkins
Zochem – General Manager: D.B. Clark
Hudson Bay Diecastings – General Manager: R.B. Wark

"Giraffe" underground at Tantalum Mining

expected early in 1981.

Administration

A new collective agreement covering 1981 and 1982 was ratified by the union membership in December.

Tantalum Mining Corporation

Production of tantalum pentoxide (Ta_2O_5) was down 10% from that of 1979. Concentrate shipments totalled 254,107 lb of contained tantalum pentoxide with 63,516 lb remaining in inventory at year-end. The Tanco tantalite quoted price per lb at year-end ranged from $US75.00 to $US102.50.

Plant capacity was increased from 750 to 1,000 tons per day; facilities were installed to process dump tailings.

Mining

Stope development in the West orebody extended mining operations to the northwest, and 1,636 feet of development drift was driven to outline low grade zones in the Shaft orebody. Most of the 7,000 feet of diamond drilling was in the West orebody area in an attempt to delineate values in the lower pegmatite. During the summer months when the concentrator retreated tailings the ore mined was stockpiled, in order to maintain the increased mill tonnage during winter months. A program of pillar recovery is being carried out.

Concentrator

Modifications to the gravity plant and construction of a froth flotation section were completed late in the year. Results from the modified circuit have been disappointing and intensive test work is in hand. New office and laboratory facilities are near completion.

Exploration

Diamond drilling totalled 19,137 feet at Bernic Lake, 10,759 feet at Lilypad Lake in northwestern Ontario, and 732 feet at other locations. No major discoveries were made. During the year 285 miles of geochemistry and geophysics were completed, during examination of 17 properties in seven provinces.

Administration

A new labour contract was negotiated with the United Steelworkers of America valid through March 15, 1983.

Francana Minerals Ltd.

Sales of detergent-grade sodium sulphate from the Cabri plant were close to the productive capacity throughout 1980. Sales of salt cake from the Alsask plant during the last half of the year were also near the production limit. Overall

value of sales was at a record level as substantial price increases occurred during the year. The cash flow generated enabled the company to make a cash contribution to its shareholders.

It is expected that sales levels will be maintained at these high levels at both plants in 1981. Engineering and cost studies for a new, larger facility at Alsask to utilize the reserves available will be initiated early in 1981.

Zochem

Zinc oxide markets were generally depressed and consumption in North America fell by approximately 20%. In spite of this Zochem was able to increase its market share, with sales increasing 3.6%. Production was approximately the same as the previous year. Unit costs suffered somewhat due to inflation but a small improvement in gross margins resulted in a slightly improved overall profitability.

Hudson Bay Diecastings

Sales of zinc diecastings were lower than 1979 levels as the slump in the North American automotive market continued through 1980. The plant operated at 58% of capacity during the year with net earnings adversely affected by the reduced throughput. Although forecasts indicate zinc diecasting use by the automotive industry will decline over the next few years, Hudson Bay Diecastings is expected to increase its share of the market.

Production from all sources Flin Flon, Snow Lake	1980	1979
Refined copper (lb)	145,013,041	133,761,692
Slab zinc (lb)	153,031,226	147,361,249
Gold (oz)	74,352	63,082
Silver (oz)	1,314,619	1,195,931
Lead in concentrate (lb)	1,270,700	901,800
Cadmium (lb)	194,290	194,477
Selenium (lb)	97,000	82,596

Ore production/Average assays – Flin Flon area

Mine	tons	Au oz/ton	Ag oz/ton	Cu %	Zn %
Flin Flon	665,530	0.035	0.55	1.33	1.89
Centennial	139,133	0.046	0.72	1.18	2.68
White Lake	62,944	0.028	0.52	2.04	5.39
Westarm	173,055	0.046	0.58	3.20	1.27
Total for 1980	1,040,662	0.038	0.58	1.66	2.11
Total for 1979	1,118,946	0.038	0.64	1.89	2.19

Ore production/Average assays – Snow Lake area

Mine	tons	Au oz/ton	Ag oz/ton	Cu %	Zn %
Stall Lake	265,733	0.041	0.25	4.58	0.52
Osborne Lake	182,186	0.006	0.13	2.42	1.01
Anderson Lake	144,376	0.032	0.21	3.10	0.14
Chisel Lake	221,316	0.042	1.19	0.42	9.89
Ghost Lake	21,096	0.036	1.07	0.65	7.91
Total for 1980	834,707	0.032	0.49	2.65	3.23
Total for 1979	762,835	0.028	0.40	2.72	4.03

Concentrator production Flin Flon, Snow Lake	1980	1979
Ore milled (tons)	1,875,760	1,874,835
Ore milled (tons/operating day)	7,443	7,469
Copper concentrate (tons)	193,858	204,597
Zinc concentrate (tons)	63,926	69,616
Lead concentrate (tons)	1,051	835

Snow Lake concentrator produced 48% of total copper, 66% of total zinc concentrate from Company ores.

Zinc Refinery Production	Zn(lb)	Cd(lb)
From HBM&S feed	60,026,938	65,270
From purchased concentrates	93,004,288	129,020
Total 1980	153,031,226	194,290
Total 1979	147,361,249	194,478

Zinc inventory was 8,018 tons at year-end 1980, 5,436 tons at year-end 1979.

Copper smelter	Anodes tons	Au(oz)	Ag(oz)	Cu(lb)	Se(lb)
From HBM&S feed	33,531	35,790	613,071	66,706,813	144,134
From purchased concentrates includes Whitehorse Copper production	39,755	40,640	720,304	79,088,953	–
Total 1980	73,286	76,430	1,333,375	145,795,766	144,134
Total 1979	67,463	64,647	1,206,726	134,262,375	127,070

Whitehorse Copper Mines production	1980	1979
Ore milled (tons)	854,306	914,060
Ore grade (% Cu)	1.58	1.12
Concentrates produced (tons)	26,145	19,640
Copper in concentrate (lb)	23,651,040	17,494,036
Gold in concentrate (oz)	21,674	15,868
Silver in concentrate (oz)	236,664	168,972

Tantalum Mining Corporation production	1980	1979
Ore milled (tons)	162,212	180,505
Ore grade (% Ta_2O_5)	0.136	0.137
Tailings reprocessed (tons)	34,779	–
Tailings grade (% Ta_2O_5)	0.055	–
Ta_2O_5 produced (lb)	297,512	344,186

Ore reserves

	tons	Au oz/ton	Ag oz/ton	Cu %	Zn %
Flin Flon/Snow Lake					
At December 31, 1980*	17,070,400	0.035	0.54	2.67	2.8
At December 31, 1979	17,455,000	0.037	0.55	2.68	2.7
Whitehorse Copper					
Diluted, recoverable:					
At December 31, 1980	1,842,000	–	–	1.40	–
At December 31, 1979	2,311,000	–	–	1.50	–

Tantalum Mining	tons	Ta_2O_5%
Proven, probable and possible:		
At December 31, 1980	1,210,000	0.14
At December 31, 1979	1,220,000	0.15
Stored tailings:		
At December 31, 1980	798,000	0.07
At December 31, 1979	833,000	0.07

*Includes 44% of proven reserve of Trout Lake orebody, the percentage interest of Company in Trout Lake joint venture; and average waste dilution of 20% and average estimated recovery of 91% of diluted tonnage.

Corporate profile

Incorporated in Maine in 1911, Inspiration Consolidated Copper Company has as its principal business the production and sale of copper from its Arizona operations. These include several open pit mines, an extensive two-stage dump leaching operation, two copper concentrators, one with a molybdenum flotation section, a smelter, solvent extraction plant, electrowinning and electrorefining tankhouses, rod fabrication and sulphuric acid plants. The company also smelts copper-bearing materials for other producers, and owns and operates a silver-bearing silica flux mine in Montana. Its exploration activities, carried out by Inspiration Development Company, cover most of the western United States.

The Arizona mines are a number of open pits near Inspiration and the Christmas open pit approximately 35 miles southeast of Inspiration.

Hudson Bay Mining owns 50% of Inspiration's common stock through a holding company which is owned equally with Minerals and Resources Corporation Limited.

In 1980 Inspiration incurred a loss of $US17.6 million, or $5.38 per common share, compared with net earnings of $US7.4 million, or $2.34 per share, in the previous year. Principal factors con-contributing to the disappointing results in 1980 include a 115-day strike following the expiration of labour contracts on June 30, production problems, interest costs on increased borrowings and higher depreciation charges.

Despite the poor financial results in 1980, several achievements are worthy of note.

Inspiration's patented ferric cure leach system was put into operation in late June, less than five months after the start of construction. The $US16 million project which was ahead of schedule and under budget includes new facilities and extensive tankhouse modifications. The system is an innovative means of producing leach solutions quickly and with high recovery rates from ores containing copper oxide minerals and chalcocite. It is integrated with the new $US14 million solvent extraction plant which was completed in October, 1979. The implementation of the ferric cure project has resulted in substantial upgrading of the leach solution.

The initial stages of modernization of the concentrator at Inspiration were completed by the fourth quarter. Substantial improvements in copper recovery have already been achieved due to the greater efficiency of the new flotation equipment and improved metallurgical control. The flotation circuit will be optimized during the first quarter of 1981. Other benefits already apparent include a cleaner working environment. Modernization rather than new construction has been a great success and has resulted in the much quicker and less expensive replacement of antiquated equipment.

Further engineering has been carried out on the smelter project which is designed to bring the smelter into full compliance with the ambient air quality and sulphur dioxide emission regulations at designed plant capacity. Efforts to comply with air quality regulations have resulted in production curtailments in recent years. Some elements of the project are in an accelerated phase: crushing, screening and handling of secondary material; modernization of process control instrumentation; and modifications to one Hoboken converter. A key part of the project lies in the modification of the converters to a design conceived by Inspiration staff.

The basic vessel will be modified substantially and sophisticated gas cleaning and draft control equipment added to ensure efficient operation with minimum release of fugitive emissions. Patent application has been filed for the new converting unit.

Salaried staff participated in production and maintenance activities during the strike period. Work by outside contractors was, for the most part, uninterrupted by the strike. In addition, through open market purchases the company was able to satisfy most customers' needs for copper during the strike period. Inspiration was the second U.S. copper producer to reach a settlement with the unions on economic issues.

Involvement in community-related projects includes development of a subdivision near the Arizona operations which will make quality housing available to employees and other residents of the area. Inspiration will recover the costs of development through land sales. Revision of the health care delivery system at the Inspiration-sponsored hospital allows freer choice of physicians by employees and has all but eliminated employee grievances and complaints.

The Black Pine mine in Montana remained profitable despite declining silver prices. The planned expansion from 6,000 tons of ore per month to 17,000 tons per month did not materialize because of a strike at the nearby Anaconda smelter to which ore was shipped, followed by a decision by Anaconda to shut down the smelter permanently. Black Pine ore is now being shipped to the Inspiration smelter and other alternatives are being considered.

Senior management

President and Chief Executive Officer: P. Steen
Vice-President and General Manager: J.B. Winter
Vice-President, Administration, and Secretary: R.F. Morison
Vice-President, Finance: M.B. Smith
Assistant Vice-President, Finance, and Treasurer: G.W.D. Petrie
Assistant General Manager: J.J. Ellis

Ferric cure pad construction at Inspiration Copper

Production

	1980	1979
	(in thousands)	
Inspiration mines		
Ore (tons)	10,127*	6,105
Waste (tons)	12,062	19,810
Total ore and waste (tons)	22,189	25,915
Average grade of ore mined (% Cu)	0.546	0.770
Christmas mine		
Ore mined (tons)	1,292	920
Waste removed (tons)	4,011	2,461
Total ore and waste (tons)	5,303	3,381
Average grade of ore mined (% Cu)	0.687	0.854
Inspiration and Christmas concentrators		
Milled (tons)	5,511	6,969
Concentrate produced (tons)	106	109
Copper produced.		
Inspiration mill (lb)	39,515	43,744
Christmas mill (lb)	13,153	12,336
Leaching (lb)	37,143	42,964
Total (lb)	89,811	99,044
Smelter and acid plant		
New metal-bearing material treated:		
Company production (tons)	104	111
Toll material (tons)	170	292
Total treated (tons)	274	403
Total copper cast	82	132
Sulphuric acid produced (tons)	176	233
Refinery		
Total cathodes (lb)	81,623	92,166
Rod plant		
Rod (lb)	74,582	102,656
Crop bar (lb)	2,184	1,944
Total copper (lb)	76,766	104,600

*includes, 5,944 tons of ferric cure material

Sales of copper

Product delivered (lb)	138,235	93,707
Average price per lb of cathode copper	99.63¢	88.85¢

Ore reserves	**Dry short tons (in thousands)**	**Grade (% Cu)**
Copper ore reserves at:		
Inspiration area mines	236,760	0.58
Christmas open pit mine	11,613	0.62

Estimated mineable ore reserves at the Black Pine mine at December 31, 1980, were 1,809,000 tons of ore with a grade of 0.45% copper and 5.85 oz of silver per ton.

Open pit operations at Inspiration Copper

Corporate profile

Terra Chemicals International, Inc., is primarily engaged in the marketing of a full line of chemical fertilizers and crop-protection chemicals. The chemical fertilizers sold are nitrogen, phosphate and potash products. Crop-protection chemicals include herbicides, pesticides and fungicides. The company also sells nitrogen animal feed ingredients consisting of urea products to feed manufacturers.

Terra markets its products at both the retail and wholesale levels. Through a network of nine retail regions consisting of nearly 100 retail farm service centres in the Midwest, South and Southwest of the U.S., the company sells fertilizer, crop-protection chemicals, seed and other farm products directly to the farmer. Equipment and services required for application of such fertilizers and chemicals are also offered. Wholesale marketing of produced and purchased nitrogen products, phosphates and potash to dealers, distributors and manufacturers extends throughout the midwestern and southwestern United States. Three wholesale regional offices are located in Iowa, Illinois and Texas.

The company manufactures nitrogen products and nitrogen feed ingredients at its chemical production complex located near its headquarters in Sioux City, Iowa. Manufacturing facilities owned in partnership at Woodward, Oklahoma, produce ammonia, nitrogen fertilizer solutions and urea liquor. Terra also purchases other chemical fertilizers and crop-protection chemicals from other producers for resale.

Net earnings totalled $US10.3 million ($1.70 per common share after preferred dividends), up from $US2.7 million (29 cents per common share after preferred dividends) for 1979. Net sales were a record $US299.0 million, up from $US254.1 million in 1979.

The 1980 earnings were the company's highest since 1976. Improved company operations, strong demand for most of the company's products and more favourable selling prices all contributed to the substantial earnings increase.

Payment of quarterly dividends at 10 cents per share of common stock was resumed following the second quarter of 1980 as a result of improved performance. Payment of dividends on common stock had been discontinued following the first quarter of 1979.

Higher fertilizer margins were the major factor in earnings improvement. Increased sales and improved gross margins of crop-protection chemicals contributed as well. A reduction in fertilizer volumes and an increase in selling, general and administrative expenses partially offset these gains.

The financial condition of the corporation remained strong. Working capital at December 31 was $US64 million, compared with $US53.7 million in 1979. Assets were $US160 million and common shareholders' equity $US55 million. The ratio of current assets to current liabilities was 2.3 to 1, and the book value per common share was $10.33. Cash balances, net of short-term borrowings, increased by $US7.3 million in 1980, compared with an increase of $US5.1 million in 1979 and a cash decrease of $US1.8 million in 1978.

During 1980, capital expenditures were principally related to the replacement of existing capital resources and the installation of equipment for energy conservation at the company's manufacturing facilities.

A steady improvement in return on common shareholders' equity has been a major objective in the company's long-range planning. In 1980, the return on common shareholders' equity improved to 19% from only 3% in 1979.

The company is reorganizing the corporation to improve financial control and to provide better communications, more aggressive marketing with quicker response to opportunities and clearer lines of direction, while encouraging entrepreneurship at the retail plant level. Considerable progress was made in the reorganization during 1980.

To provide increased support to the marketing function and to improve co-ordination of product sourcing with increased ability for obtaining cost advantages, the supply and distribution function was integrated with the manufacturing function.

Production from the Port Neal manufacturing facility exceeded half a million tons, a manufacturing record. Total fertilizer storage capacity throughout the distribution system was increased by 34,500 tons, and the purchasing of crop-protection chemicals was centralized at the corporate office.

The company accounting function was centralized and restructured into corporate, retail, financial analysis and manufacturing accounting groups. Regional accounting and credit field offices have been established to assist retail managers.

The strategy of the wholesale division is to increase market share in those areas adjacent to the source of product, with development of the southwestern market as a major objective. During 1980, this division increased Terra's share of the nitrogen solution market within a 200-mile radius of the Woodward, Oklahoma, manufacturing location by 4%.

Senior management

President and Chief Executive Officer: W. T. Dible
Senior Vice-President – Finance and Secretary: R. H. Armor
Senior Vice-President – Corporate Affairs: L. W. Galloway
Vice-President – Retail: P. D. Foster
Vice-President – Personnel: J. F. Kisela
Vice-President – Controller: R. W. Nason, Jr.
Vice-President – Supply and Distribution: C. G. Nevaril
Vice-President – Wholesale Sales: J. A. Skinner
Vice-President – Information Systems: J. F. Wokosin

Stored feed urea at Terra's Port Neal complex

Total wholesale customers increased by more than 100. Wholesale fertilizer sales in 1980 totaled $US55.3 million, up from $US46.2 million in 1979. Feed urea sales were $US12.6 million, compared with $US10.6 million in 1979.

With the objective of improving the efficiency and market position of retail operations, the retail marketing function, previously operated through four retail districts, has been restructured into nine retail regions to permit managers to concentrate on operations and sales efforts in their geographic areas. Centralized support is provided through the three strategically located retail accounting offices and credit field offices at five locations to provide accessibility for retail locations. Retail sales for the year increased 17% over 1979 sales.

The company is committed to a strong service and professional management program. In line with the company's strategy to differentiate Terra's retail group from industry competitors, a product services group has been established to provide support in identification and promotion of product and service innovations, development of marketing programs and technical assistance to managers and their farmer customers. A training program for retail plant managers is designed to lead to professional certification, with the objective of increasing technical knowledge and skill for better serving the farmer.

Terra continues to emphasize asset management, particularly in the retail operations.

During 1980, considerable progress was made in providing better cost and operating information to plant managers, as well as timely data for corporate analytical purposes, through installation of new computer hardware and staffing of the information systems group. A computer network is being developed throughout the organization.

The company is investigating several opportunities in fertilizers.

Corporate profile

Francana Oil & Gas Ltd., a publicly-traded company in which Hudson Bay Mining owns a controlling interest, is directly engaged in the exploration for and development of crude oil and natural gas reserves, the production and sale of crude oil and natural gas liquids, and the production, treatment and sale of natural gas in Canada. Through a controlled subsidiary, Trend International Limited, and Trend's wholly-owned subsidiary, Trend Exploration Limited, Francana conducts exploration and producing operations in the United States, Canada, Indonesia and other overseas areas. During 1980, Francana completed a reorganization whereby it acquired the assets and business of Canadian Merrill Ltd. and became listed on the American Stock Exchange.

Consolidated net earnings for 1980, including the net gain of $11.8 million (91 cents per share) on the sale of the Douglas Creek Arch gas properties located in Western Colorado amounted to $32.7 million ($2.51 per share) compared to $15.7 million ($1.21 per share) in 1979. The proceeds of the sale were used to retire $20.2 million, or all of the company's debt, and the balance was added to working capital.

Consolidated gross revenue for 1980 increased to $150.0 million from $100.2 million for 1979, and the after-tax cash flow, including the $32.5 million proceeds on the sale of the gas properties, increased to $89.4 million from $45.3 million.

Contributions to consolidated gross revenue, net earnings and after-tax cash flow from Francana's Canadian operations and from Trend's United States, Canadian and Indonesian operations are given in an accompanying table.

The increased revenue and earnings resulted primarily from higher prices for crude oil in Indonesia and natural gas in Canada. From a financial perspective, these price increases more than offset the reduced levels of Indonesian crude oil production resulting from normal reservoir decline and of Canadian natural gas production resulting from reduced demand for natural gas.

Senior management

Francana Oil & Gas Ltd.

Chairman and Chief Executive Officer: V. Van Sant, Jr.
President and Chief Operating Officer: R.A. Wasteneys
Senior Vice-President, Operations: N.A. Knowles
Vice-President, Exploration: E.W. Hayes
Vice-President, Corporate Development: S.N. Inbusch
Vice-President, Finance: G.B. Padley
Administrative Vice-President and Secretary: A.J. Williams

Trend Exploration Limited

Chairman: R.A. Wasteneys
President and Chief Executive Officer: J. Debray
Executive Vice-President: R.A. Halpin
Senior Vice-President, Corporate Development: H.J. Davis
Senior Vice-President, Exploration: E. Hardman
Vice-President, Engineering: D.W. Martin
Vice-President, Geology: J.L. Redmond

Production and sales

Francana's 1980 Canadian crude oil and natural gas liquids sales amounted to 1,217,000 barrels (3,325 bpd) compared to 1,119,000 barrels (3,066 bpd) in 1979. These figures include Trend's Canadian sales of 134,000 barrels (366 bpd) in 1980 and 135,000 barrels (370 bpd) in 1979. Trend's 1980 United States crude oil and natural gas liquids sales amounted to 363,000 barrels (992 bpd) compared to 361,000 barrels (989 bpd) in 1979.

Gross crude oil production from the Salawati Basin in Indonesia, which Trend operates and in which it holds a 27% working interest, was 19,683,000 barrels (53,779 bpd) in 1980 compared to 22,456,000 barrels (61,523 bpd) in 1979. Trend's net share of this production after all deductions, was 1,668,000 barrels (4,557 bpd) in 1980 and 2,007,000 barrels (5,492 bpd) in the previous year. The lower production rate reflects the normal decline of these reservoirs and the operation of the production sharing contract between Trend and Pertamina, the Indonesian national oil company.

Natural gas sales in Canada amounted to 15,038 million cubic feet (41.1 mmcfd) compared to 18,051 million cubic feet (49.5 mmcfd) in 1979. These figures include Trend's Canadian sales of 302 million cubic feet (0.8 mmcfd) in 1980 and 363 million cubic feet (1.0 mmcfd) in 1979. The lower sales reflect market curtailments imposed by the major gas purchaser. Trend's 1980 United States natural gas sales amounted to 1,415 million cubic feet (3.9 mmcfd) compared to 1,460 million cubic feet (4.0 mmcfd) in 1979.

The average prices received by Francana during the year for Canadian crude oil and natural gas were $15.20 per barrel and $2.35 per thousand cubic feet compared to $12.58 per barrel and $1.76 per thousand cubic feet in 1979. The United States average prices were $US19.21 per barrel and $1.87 per thousand cubic feet compared to $US13.25 per barrel and $1.32 per thousand cubic feet and the average price in Indonesia was $US32.36 per barrel and $US18.26 per barrel in 1979.

Consolidated capital expenditures for 1980 amount to $59.0 million compared to $42.3 million in 1979. Expenditures for land acquisition and retention, geological and geophysical work, and drilling and production equipment were $20.5 million in Canada, $US27.5 million in the United States and $US2.7 million in Indonesia and other international areas of activity. Assuming that the economic returns in Canada remain as outlined in the National Energy Program, described below, Francana intends to concentrate its 1981 capital expenditure program in the United States and internationally. The company has reduced its estimated 1981 Canadian expenditures by approximately 35% to $27.5 million while proposing to spend $US41.1 million in the United States and $US8.6 million internationally.

The National Energy Program

On October 28, 1980, the federal Government of Canada introduced its budget and National Energy Program. These proposals did not affect 1980 results, but will reduce cash flow and earnings from Canadian operations beginning in 1981. Canadian operations will be affected significantly by the Petroleum and Gas Revenue Tax, the phasing-out of the earned depletion allowance and the absence of immediate well-head price increases. Since Francana Oil has a relatively minor acreage position on "Canada Lands" (lands outside the provinces and in the offshore areas of Canada) it will not be severely penalized by the Crown's right to "back-into" 25% of all such acreage. The effect of these proposals could be to reduce projected cash flow approximately 30% while increasing the effective tax rate on income to more than 80%. Further, strict parameters limit the future incentive payments, employed as a substitute for the earned depletion allowance, principally to Canadian owned and controlled companies, thereby denying these benefits to Francana. In the extreme case of Saskatchewan crude oil production, the combination of the National Energy Program proposals and the existing high level of provincial royalty does not allow a return to the producer sufficient to cover simple operating costs. Until the federal and provincial governments negotiate a revenue-sharing agreement which allows a return to the producer sufficient to justify the costs and risks associated with exploration and development, Francana will continue to concentrate on non-Canadian opportunities. The investment in Canada will be sufficient only to maintain the current position and explore for and develop the very best prospects.

Francana's overall corporate objective is to maintain three areas of operation: Canada through Francana; the United States through Trend Exploration Limited, a wholly-owned subsidiary of Trend International; and international through Trend International Limited, with the flexibility to shift both capital and personnel among the major areas as geological, economic and political factors favour one or more of the areas.

Contributions to consolidated gross revenue, net earnings and after-tax cash flow from Francana's Canadian operations and from Trend's United States, Canadian and Indonesian operations.

($ million)	Gross revenue		Net earnings		After-tax cash flow	
	1980	1979	1980	1979	1980	1979
Francana (Canada only)	$ 52.9	$ 43.7	$ 7.7	$ 7.9	$23.0	$21.0
Trend (before minority interest)	64.4	56.5	22.7	14.7	33.9	24.3
Gain on sale of gas properties	32.7	-	11.8	-	32.5	-
	$150.0	$100.2	$ 42.2	$ 22.6	$89.4	$45.3
Minority interest in Trend			9.5	6.9		
			$32.7	$15.7		

Reserves

Francana's estimated reserves, before royalties and mineral taxes, at year-end, including all of Trend's estimated reserves, were:

	Oil and natural gas liquids (thousands of barrels)		Natural gas (million cubic feet)	
	1980	1979	1980	1979
Canada				
Proved	10,121	11,076	183,370	189,755
Probable	12,342	12,785	43,417	63,652
	22,463	23,861	226,787	253,407
United States				
Proved	2,787	2,433	19,685	39,386
Indonesia				
Proved	8,889	9,078	-	-
Total	34,139	35,372	246,472	292,793

Included in the Canadian totals are 1,065 thousand barrels (1,660 thousand barrels in 1979) and 6,035 million cubic feet (7,417 million cubic feet in 1979) attributed to Trend's operations. The sale of the Douglas Creek Arch properties reduced the United States natural gas reserves by 26,482 million cubic feet.

Acreage

At December 31, 1980, Francana, including Trend, held direct interests in 19,782,821 gross and 2,765,921 net acres distributed as follows:

	Gross acres	Net acres
Canada		
Western Canada	1,989,914	711,027
Territories and Arctic Islands	537,136	42,833
East Coast Offshore	494,687	74,064
	3,021,737	827,924
United States		
Gulf Coast	169,284	80,305
Mid Continent	32,613	19,033
Rocky Mountain	1,437,926	626,886
Other	28,981	2,522
	1,668,804	728,746
International		
Indonesia	247,104	22,745
North Sea	25,176	906
Paraguay	14,820,000	1,185,600
	15,092,280	1,209,251
Total	19,782,821	2,765,921

Exploration

Hudson Bay Exploration and Development Company Limited

Corporate profile

Hudson Bay Exploration and Development Company Limited is a wholly-owned subsidiary of Hudson Bay Mining and Smelting Co., Limited, established to do mineral exploration work in Canada on behalf of the parent company. Exploration offices are situated at Flin Flon, Manitoba; Toronto, Ontario; Vancouver, B.C.; Whitehorse, Yukon; Thunder Bay, Ontario; and Val d'Or, Quebec.

Hudson Bay Exploration and Development Company Limited explored in 1980 for its own account in Manitoba, Saskatchewan, Yukon, New Brunswick and Nova Scotia and participated with Anglo American Corporation of Canada Limited and Tombill Mines Limited in joint venture exploration programs in British Columbia, Yukon, Ontario and Quebec and in the Athabasca uranium area of Saskatchewan. Surface exploration diamond drilling totalling 89,381 feet in 208 holes was done to test 164 geophysical anomalies and to investigate further several mineralized zones; 8,842 feet were drilled by Manitoba Mineral Resources Ltd. (MMR) and Saskatchewan Mining Development Corporation (SMDC) on projects in which Hudson Bay Exploration holds participating interests. Airborne electromagnetic and magnetic surveys were flown using the company-owned EM-30 system for a total of 17,307 miles over several areas in Saskatchewan, Manitoba, Ontario, Quebec and New Brunswick.

Options were taken by the company on 16 properties during 1980, and at year-end 33 options were retained in good standing. Including the options, the company controls 1,436,869 acres in claim blocks, mineral reservations and exploration permits.

Senior management
President: J.B. Howkins
Vice-President: P.L. Martin

At the Tom lead-zinc-silver property (now Tom Valley project) near MacMillan Pass on the Yukon – N.W.T. boundary, work was started on a three-year, $10 million, exploration program. The program entails underground exploration and delineation of the deposit, metallurgical testing and climatic and environmental studies. The initial work included 6,371 feet of fill-in drilling from surface and underground and construction of a new camp and portal in preparation for the start of a declined exploration adit.

On a property optioned from Risby Tungsten Mines Ltd. and located near Ross River, Yukon, a drilling program continued to test a tungsten-bearing skarn zone located by previous work. The zone has been tested along 1,200 feet of strike length and to a vertical depth of 800 feet. It is still open at depth and will be further explored in 1981.

On the property south of Reed Lake in Manitoba, which is being explored under a joint venture agreement with MMR, drilling was concluded on the Sylvia copper-zinc deposit. This drilling has outlined two parallel-plunging zones of better-grade material to the deepest effective drilling depth of 1,900 feet vertically below surface. These zones contain a drill-indicated diluted tonnage of 1,000,000 tons at a grade of 2.4% copper and 0.8% zinc. A study into the economic viability of these deposits is proposed for 1981.

An option agreement was signed with Nor-Acme Gold Mines Limited on a former gold-producing property at Snow Lake, Manitoba. Under the two-year option agreement Hudson Bay Exploration will carry out deep drill exploration on the main zone and study the feasibility of mining a shallower subsidiary zone estimated to contain 445,000 tons at a grade of 0.133 ounces of gold per ton.

The 1981 budget controlled by Hudson Bay Exploration totals $7.77 million, including $1,268,000 to be contributed by other participants in shared programs. Approximately 60% of the total exploration budget will be spent in the Flin Flon – Snow Lake area, 25% in B.C. and Yukon and 15% in Eastern Canada.

Tungsten prospect in Yukon

Inspiration Development Company

Corporate profile

Inspiration Development Company is a wholly-owned subsidiary of Inspiration Consolidated Copper Company, formed for the purpose of carrying out exploration for ore deposits, mainly in the United States. Offices are maintained at Claypool, Arizona; Grand Junction, Colorado; Reno, Nevada; and Spokane, Washington.

Inspiration Development Company was active in all western states of the U.S. and in Alaska.

Work on a tungsten deposit in California continued to provide encouragement and fifty-two diamond drill holes have been completed with an aggregate footage of 31,343 feet. Drilling has outlined a tungsten skarn deposit with by-product values in copper, silver and zinc. Samples from this deposit have been submitted for metallurgical tests and when the results are available further studies into the economic viability of the deposit will be undertaken.

Exploration continued at the Ima mine in Idaho, a vein-type occurrence of tungsten with by-product values in silver, molybdenum, copper, lead and zinc. Nine diamond drill holes totalling 8,311 feet were completed, and two new veins have been discovered. Further diamond drilling is planned for 1981 and metallurgical studies will be undertaken. Provided that results are satisfactory, examination of the economic feasibility of mining from existing workings will be studied.

Also in Idaho, drilling and metallurgical testwork continued at the Bayhorse project which is a stratabound fluorspar occurrence with associated lead, silver and zinc values. Rotary drilling amounted to 5,425 feet and included nine holes and two water well holes. A total of 3,295 feet of diamond drilling was completed in 15 exploration holes and two mill site test holes. Samples were also collected from underground workings for metallurgical tests. When the results are available studies of economic viability will be undertaken. Drilling was also carried out on two additional properties located near Bayhorse.

A silver-bearing quartz vein at the abandoned Sanger mine in southwestern Nevada was tested by four diamond drill holes totalling 1,983 feet and six percussion holes totalling 1,510 feet. The results indicated the vein is persistent along 1,200 feet of strike. It is recommended that the old workings be rehabilitated and exploration by underground development be undertaken during 1981. While it is unlikely that this deposit will contain a large tonnage, there is a possibility of a small high grade silver deposit being outlined that is well located with regard to available milling capacity.

An active program of exploration is planned for 1981 and a budget of US$6,000,000 has been approved. Metallurgical testing will continue on the mineralization from three deposits and, if satisfactory results are obtained, economic feasibility studies will be undertaken. The Copper Flat property in New Mexico was leased some years ago to Quintana Minerals and that company has announced plans to place the property in production. Inspiration has retained a royalty interest and may begin to receive payments when production begins in 1982.

Senior management
President: J.B. Howkins
Vice-President: J.G. Kuhn

Ima project in Idaho

Supplementary information on inflation (unaudited)

Inflation is the decline in the purchasing power of money. All of the Company's activities are affected by it.

Metals

In the shorter term, metal prices are more sensitive to supply and demand factors than to inflation. In the last five years, unit costs of production have included steadily rising labour and energy costs. Current replacement cost of productive mineral properties and metallurgical plants is much higher than the cost of existing facilities, some of which have been in operation for fifty years. Earnings have not been recalculated on a current cost basis as we believe present reporting experiments by the accounting profession are inconclusive and of limited value for companies in the natural resource industry, and could be misleading.

The following operating statistics present information with respect to the reserves, production and selling prices of the Company's Canadian mining operations over the last five years and are intended to assist in assessing the performance of the Company in an inflationary environment.

		1980	1979	1978	1977	1976
Proven ore reserves at end of year:						
Tons (millions)		18.3	19.0	17.0	17.5	17.5
Copper grade – percent		2.58	2.58	2.76	2.75	2.66
Zinc grade – percent		2.8	2.7	2.7	2.7	2.9
Gold grade – oz per ton		0.035	0.037	0.037	0.036	0.035
Silver grade – oz per ton		0.54	0.55	0.40	0.53	0.55
Tons reserves acquired (millions)		2.5	1.5	–	–	–
Tons ore mined (millions)		2.4	2.5	1.8	1.8	1.6
Metal produced from Company mines:						
Copper – millions pounds		82.5	77.8	70.2	68.4	60.2
Zinc – millions pounds		59.9	57.4	63.9	64.7	52.1
Gold – thousands ounces		50.2	47.8	41.5	43.4	38.4
Silver – thousands ounces		770.8	766.7	671.1	716.0	619.5
Average sales price:						
Copper – cents/lb	– actual	114.8	105.4	71.8	64.5	63.7
	– base 1976	81.2	82.1	61.0	59.7	63.7
Zinc – cents/lb	– actual	42.8	41.8	33.4	35.7	36.9
	– base 1976	30.3	32.6	28.4	33.1	36.9
Gold – dollars/oz	– actual	715.58	343.92	210.41	160.14	120.23
	– base 1976	505.93	267.83	178.82	148.29	120.23
Silver – dollars/oz	– actual	24.28	12.53	6.18	4.96	4.29
	– base 1976	17.17	9.76	5.25	4.59	4.29

Petroleum

During the last five years petroleum operations in the U.S. and Indonesia were favourably affected by OPEC price escalations much beyond the general inflation level. The weighted average price of Indonesian crude oil has recently reached $30 per bbl in terms of average 1976 dollars compared to an average 1976 price of $12.60 per bbl. Canadian performance has been handicapped by governmental control and participation in pricing. In late 1980, this government involvement expanded with the introduction of the National Energy Program which places further limitations on future product pricing and imposes additional taxes.

Fertilizer

For the first time since 1974, Terra in 1980 experienced increases in fertilizer selling prices that outpaced cost increases and resulted in a significant increase in pre-tax earnings. The manufacturing operations continued to face cost increases attributable to escalating energy costs. Furthermore, with the significant expansion of its revenues, Terra has faced increased working capital requirements.

Liquidity

Working capital over the last three years has exceeded normal requirements as a result of the sale of potash mining assets in 1977, and it increased again in 1980 from the sale of certain natural gas properties and the sale of the Rosario shares. A considerable amount has been invested in mining and petroleum assets over this period.

As there could be a cost associated with holding this level of liquidity management is pursuing strategies that maintain a balance between an appropriate level of liquidity to withstand the cyclicality of certain of the Company's operations and being in a position to take advantage of investment opportunities.

Supplementary petroleum information

The Securities and Exchange Commission (SEC) of the United States requires disclosure of the following supplementary financial and other information relating to oil and gas activities. The Company's petroleum operations are carried out by a 58%-owned subsidiary, Francana Oil & Gas Ltd. Francana follows the full cost method of accounting for oil and gas properties which is consistent with current SEC requirements.

Selected cost and revenue information

1980	Canada	United States	Indonesia
Capitalized costs	$ 142,843	$ 63,060	$ 64,029
Accumulated depreciation and depletion	43,416	11,559	38,226
Property acquisition costs	3,397	6,924	–
Exploration costs	10,152	18,146	1,135
Development costs	6,428	8,401	2,449
Production (lifting) costs	6,450	2,486	10,162
Depreciation and depletion provisions	10,003	4,590	5,941
Depreciation and depletion per equivalent barrel produced	2.70	8.02	3.56
Net revenues from developed reserves	28,518	7,468	52,923
1979			
Capitalized costs	$ 121,858	$ 47,261	$ 58,686
Accumulated depreciation and depletion	33,406	9,904	32,479
Property acquisition costs	6,315	1,730	–
Exploration costs	9,148	4,899	166
Development costs	8,346	8,823	2,220
Production (lifting) costs	5,354	1,796	8,491
Depreciation and depletion provisions	8,616	2,829	5,805
Depreciation and depletion per equivalent barrel produced	2.00	5.04	2.91
Net revenues from developed reserves	25,824	4,557	34,676
1978			
Capitalized costs	$ 89,115	$ 35,789	$ 61,085
Accumulated depreciation and depletion	21,346	8,003	30,030
Property acquisition costs	4,687	1,071	–
Exploration costs	6,212	4,533	–
Development costs	6,698	1,611	2,869
Production (lifting) costs	3,937	1,364	7,524
Depreciation and depletion provisions	5,727	2,023	4,901
Depreciation and depletion per equivalent barrel produced	1.81	7.52	2.82
Net revenues from developed reserves	18,482	4,008	29,213

- Capitalized costs and related accumulated depreciation and depletion are as at year-end.
- All other data relate to the year indicated.
- Cost data include costs capitalized and expensed.
- Capitalized costs relating to producing operations are depreciated and depleted using the unit-of-production method based on estimated proven reserves. For this calculation, natural gas reserves and production are stated in equivalent barrels of crude oil based on relative net sales value.
- Net revenues are after royalties and production costs but exclude depreciation, depletion and interest costs.

Selected estimated reserve information (unaudited)

	Canada		United States		Indonesia
	Crude oil	Natural gas	Crude oil	Natural gas	Crude oil
December 31, 1977:					
Proved reserves	16,563	318,409	2,372	168,841	14,063
Proved and developed	16,127	308,293	2,300	67,047	14,063
1978:					
Revisions of previous estimates	(815)	(110,790)	254	(66,869)	1,356
Extensions, discoveries and other additions	1,933	13,145	234	2,125	–
Production	(1,048)	(14,451)	(423)	(1,181)	(2,506)
December 31, 1978:					
Proved reserves	16,633	206,313	2,437	102,916	12,913
Proved and developed	16,513	187,686	2,282	30,018	12,913
1979:					
Revisions of previous estimates	(4,907)	(19,658)	(217)	(68,835)	(1,873)
Extensions, discoveries and other additions	469	21,151	574	6,765	45
Production	(1,119)	(18,051)	(361)	(1,460)	(2,007)
December 31, 1979:					
Proved reserves	11,076	189,755	2,433	39,386	9,078
Proved and developed	10,946	189,755	2,067	28,567	9,078
1980:					
Revisions of previous estimates	238	(7,298)	(335)	(818)	1,479
Extensions, discoveries and other additions	24	15,951	1,052	9,014	–
Production	(1,217)	(15,038)	(363)	(1,415)	(1,668)
Sale of reserves in place	–	–	–	(26,482)	–
December 31, 1980:					
Proved reserves	10,121	183,370	2,787	19,685	8,889
Proved and developed	10,121	183,370	1,921	14,772	8,889

- The above table shows continuity of proved reserves of crude oil (thousands of barrels) and natural gas (millions of cubic feet) from December 31, 1977 through December 31, 1980 and includes proved and developed reserves as at each year-end. All reserve data are before royalties and mineral taxes. Indonesian reserves represent an entitlement to gross revenues in accordance with the production-sharing contract.

Proved reserves are estimated quantities of crude oil, natural gas and natural gas liquids which have been demonstrated, with reasonable certainty, to be recoverable in future years from known reservoirs under existing economic and operating conditions. The estimates are based on judgements and interpretations of data dependent upon uncertainties including market conditions, government action and the environment itself. Ultimate recovery from proved reserves may be different from these estimates.

The latest estimates of oil and gas reserves were made by McDaniel Consultants (1965) Ltd. for Canadian properties and by H.K. Van Poolen and Associates, Inc. for United States and Indonesia properties.

Reserve estimates and production volumes represent ownership interest before deduction of royalties. The Company believes this presentation provides the most meaningful and appropriate information because present Canadian royalty rates on Crown leases in certain provinces are dependent upon and can vary significantly with change in prices, production rates and other factors.

Future net revenues from estimated production of proved oil and gas reserves (unaudited)
Present value of estimated future net revenues (using a 10% discount factor) obtainable from proved oil and gas reserves are set forth in the following table. Estimated future net revenues have been calculated on an undiscounted basis and assume continuation of current prices, royalty rates, costs and economic conditions. Lifting costs, royalties, future capital costs (based on current costs) and United States windfall profits tax have been deducted from gross revenues in arriving at net revenues; depreciation, depletion, interest, income taxes, including the 8% petroleum and gas revenue tax, and Indonesian income tax have not been deducted. Current exchange rates have been used.

	Canada		United States		Indonesia	
	Proved developed and undeveloped	Proved developed	Proved developed and undeveloped	Proved developed	Proved developed and undeveloped	Proved developed
1979	$146,997	$146,859	$ 48,816	$ 41,914	$ 98,469	$ 98,469
1980	175,956	175,956	63,020	46,532	108,552	108,552
1981	31,398	31,398	14,114	13,898	35,917	35,917
1982	30,382	30,382	16,757	11,019	27,193	27,193
1983	26,615	26,615	12,206	8,129	20,415	20,415
Thereafter	236,549	236,549	52,875	35,414	82,455	82,455
	$647,897	$647,759	$207,788	$156,906	$373,001	$373,001

Reserve Recognition Accounting (unaudited)

The SEC has concluded that the traditional methods of accounting for oil and gas activities, including the full cost method, fail to provide sufficient information on financial position and operating results relating to these activities. They do not provide timely recognition of oil and gas reserves in reported assets and earnings. Accordingly, the SEC has developed reserve recognition accounting (RRA) which is to be provided as supplementary information.

The more significant differences between RRA and full cost accounting are:

(i) Under RRA, the defined value of proved oil and gas reserves plus temporarily deferred costs relating to the exploration for and development of additional reserves are reported as an asset on the statement of financial position, whereas using full cost accounting, all costs associated with the exploration for and development of oil and gas reserves are reported as an asset on the statement of financial position.

(ii) Under RRA, additions to proved reserves and changes in valuation of proved reserves are included in the current income statement. The value of reserve additions is reduced by all costs already incurred in the related exploration and development process plus the present value of all estimated future costs for the development and production of these reserves. Non-productive exploration and development costs are charged to the earnings statement as incurred. Changes in valuation include changes in previous reserve estimates, oil and gas prices, future production and capital costs and production schedules. The actual production and sale of oil and gas does not directly affect the earnings statement.

(iii) Under full cost accounting, additions to proved reserves and changes in valuation of proved reserves do not immediately affect the earnings statement, unless the depreciation, depletion and amortization rate per unit produced changes.

Procedures used to develop a present dollar valuation of proved reserves begin with an estimate of quantities of proved reserves by year of expected production based on current economic conditions. These quantities are then valued using year-end prices adjusted for control escalation provisions that are fixed and determinable. Future gross reserves are reduced by the estimated future cost of developing and producing the reserves based on year-end cost estimates. The resulting future net reserves are then discounted to the present value amount by applying a ten percent discount factor.

This valuation procedure does not necessarily yield the best estimate of fair market value because such an estimate should also take into account, among other factors, the likelihood of future recoveries of oil and gas in excess of proved reserves and anticipated future prices of oil and gas and related development and production costs.

Net additions to estimated proved reserves represent the discounted gross revenues expected from those reserves added during the year from exploration and development wells net of estimated future development and production costs. Revisions to estimates of reserves proved in prior years include the effect of changes in estimated future development production costs and estimates of ultimately recoverable quantities of proved reserves have been aggregated. The impact from the passage of time on the discounted cash flow approach to the valuation of the proved reserves is represented by the accretion of discount.

Those costs associated with finding and developing the current year's additions to proved reserves in addition to all costs determined to be non-productive during the year are reported as expenses for the current year. The costs of acquiring unproven properties and drilling exploration wells are deferred. Any development costs incurred in the current year, but applicable to reserves added in prior years are included in the current year's summary of oil and gas producing activities only to the extent that differences between actual and estimated costs are included as revisions to estimates of reserves proved in prior years. Expenditures for development costs result in a higher present value and reduce the deduction used in computing future cash flows. Accordingly, they appear in the reconciliation of changes in the present value of estimated net revenues.

The total provision for income taxes includes both a current and a deferred provision. The current provision is based on oil and gas activities during the period. The deferred provision is based on the difference between the RRA valuation of proved reserves and the tax basis, taking into account permanent differences and investment tax credits. The total income tax provision consists of the current tax provision plus the change in the deferred provision during the period.

The following schedules summarize the effect of all oil and gas activities on the current year's income and reconcile the changes in present value of estimated future net reserves from proved reserves using the above noted principles of reserves recognition accounting.

Consolidated summary of oil and gas activities on the basis of reserve recognition accounting

For the years ended December 31	1980	1979
	(in thousands)	
Additions and revisions to estimated proved oil and gas reserves:		
Additions to estimated proved reserves, net	$ 27,383	$ 31,969
Revisions to estimates of reserves proved in prior years:		
Changes in prices	80,694	107,984
Other	19,122	(17,085)
Accretion of discount	29,800	18,992
	156,999	141,860
Less evaluated acquisition, exploration and development costs incurred including impairments	33,342	29,857
RRA income before other revenue	123,657	112,003
Other revenue (expenses):		
Interest and other income	3,351	4,064
General and administrative	(6,599)	(4,274)
Interest on long and short-term debt	(2,868)	(2,712)
Gain (loss) on translation of foreign currency	513	(353)
Total other expenses	(5,603)	(3,275)
RRA income before taxes and minority interests	118,054	108,728
Provision for income taxes	56,981	57,970
RRA net income before minority interests	$ 61,073	$ 50,758

Consolidated changes in present value of estimated future net revenue from proved oil and gas reserves

For the years ended December 31	1980	1979
	(in thousands)	
Increases:		
Additions and revisions	$156,999	$141,860
Expenditures that reduce estimated future development costs	13,082	11,233
Subtotal	170,081	153,093
Decreases:		
Sales of oil and gas, net after royalty	108,007	80,698
Less: Production and operating costs	19,098	15,641
	88,909	65,057
Sales of reserves in place	32,498	-
Subtotal	121,407	65,057
Net increase	48,674	88,036
Beginning of the year	294,282	207,786
Adjustment for translation of foreign currency	3,727	(1,540)
End of the year	$346,683	$294,282

Corporate information

Hudson Bay Mining and Smelting Co., Limited

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Telex: 065-24472

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The Royal Trust Company –
Montreal, Toronto, Winnipeg,
Regina, Calgary, Vancouver.
Morgan Guaranty Trust Company
of New York – New York, N.Y.

Registrars
Montreal Trust Company –
Montreal, Regina
Crown Trust Company –
Toronto, Winnipeg, Calgary, Vancouver.
The Chase Manhattan Bank – New York, N.Y.

Principal addresses

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Tantalum Mining Corporation of Canada Limited
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Whitehorse Copper Mines
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Zochem
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Fertilizers and agricultural products
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Exploration
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P.O. Box 1500, Flin Flon, Manitoba R8A 1N9
440 – 1055 W. Hastings Street, Vancouver, B.C. V6E 2E9

Directors

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Managing Director and Chief Executive
Charter Consolidated Limited
A mining-finance house

*H.P. Crawford, Q.C., Toronto
A Senior Partner
Osler, Hoskin & Harcourt
Barristers and solicitors

*†E.P. Gush, Toronto
Chairman, President and Chief Executive Officer
Hudson Bay Mining

M.B. Hofmeyr, Johannesburg
An Executive Director
Anglo American Corporation
of South Africa Limited
A mining-finance house

†R.H. Jones, Winnipeg
President and Chief Executive Officer
The Investors Group
A financial holding company

*†A.T. Lambert, Toronto
Former Chairman
The Toronto-Dominion Bank
A Canadian chartered bank

H.C.F. Mockridge, Q.C., Toronto
A Senior Partner
Osler, Hoskin & Harcourt

*W. A. Morrice, Victoria
Former President (retired)
Hudson Bay Mining

G.W.H. Relly, Johannesburg
Joint Deputy Chairman
Anglo American Corporation
of South Africa Limited

*A. Sweatman, Q.C., Winnipeg
Partner
Thompson, Dorfman, Sweatman
Barristers and solicitors

J.D. Taylor, Q.C., Johannesburg
Alternate Director and Manager
Anglo American Corporation
of South Africa Limited

V. Van Sant, Jr., Calgary
Chairman and Chief Executive Officer
Francana Oil & Gas Ltd.
A petroleum exploration and development company

*Member of the Executive Committee
†Member of the Audit Committee

Officers

E.P. Gush
Chairman, President and
Chief Executive Officer

H.S. Schwartz
President
Canadian Metals Division

M.B. O'Shaughnessy
President
Marketing Division

A.M. Doull
Senior Vice-President – Finance

J.B. Howkins
Senior Vice-President – Exploration

J.R. Sadler
Senior Vice-President
Canadian Metals Division

C.K. Taylor, Q.C.
Senior Vice-President – Administration
Secretary and General Counsel

S.R. Horne
Vice-President – Investments

D.W. Perks
Vice-President – Finance
and Treasurer

C.L. Sarthou
Vice-President – Market Research
and Development

W. A. Atkinson
Comptroller

S. Kozel
Assistant Secretary

Major Holdings

Metals/industrial products
Canadian Metals Division:
Flin Flon – Snow Lake Operations (100%)
Francana Minerals Ltd. (60%)
Hudson Bay Diecastings (100%)
Tantalum Mining Corporation of Canada Limited (37.5%)
Whitehorse Copper Mines (100%)
Zochem (100%)

Compania Cuprifera La Verde, S.A. (32%)
Hudson Bay Exploration and Development Company Limited (100%)
Inspiration Consolidated Copper Company (50%)
Inspiration Mines Inc. (50%)
Stikine Copper Limited (35.3%)

Petroleum
Francana Oil & Gas Ltd. (57.9%)
Trend International Limited
(Francana Oil & Gas holds 56.8%)

Fertilizers and agricultural products
Terra Chemicals International Inc. (55.1%)

Coal
Inspiration Coal Inc. (50%)

For a copy of the annual report
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